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THE HISTORY OF THE ARTS and SCIENCES OF THE ANTIENTS,

Under the following HEADS:

In THREE VOLUMES.

VOL. I.

AGRICULTURE, COMMERCE, ARCHITECTURE, SCULPTURE, PAINTING, MUSIC, the ART MILITARY.

VOL. II.

ART MILITARY, GRAMMAR, PHILOLOGY, RHETORIC, POETRY.

VOL. III.

POETRY, HISTORY, ELOQUENCE, PHILOSOPHY, CIVIL LAW, METAPHYSICS and PHYSICS, PHYSIC, BOTANY, CHYMISTY, ANATOMY, MATHEMATICS, GEOMETRY, ASTRONOMY, ARITHMETIC, GEOGRAPHY, and NAVIGATION.

By Mr. ROLLIN,

Late Principal of the University of Paris, Professor of Eloquence in the Royal College, and Member of the Royal Academy of Inscriptions and Belles Lettres.

Tranſlated from the FRENCH.

The SECOND EDITION.

Illuſtrated with Fifty-two Copper Plates, repreſenting the CIVIL and MILITARY ARCHITECTURE of the ANTIENTS, their TEMPLES, MACHINES, ENGINES of WAR, PAINTING, *&c.*

LONDON:

Printed for J. and F. RIVINGTON; R. BALDWIN; HAWES, CLARKE and COLLINS; R. HORSFIELD; W. JOHNSTON; W. OWEN; T. CASLON; S. CROWDER; B. LAW; Z. STUART; ROBINSON and ROBERTS; and, NEWBERY and CARNAN.

M DCC LXVIII.

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MDCCLXVIII.

HISTORY

THE

TRANSLATOR

TO THE

READER.

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READER.

UPON reading this part of the antient history in French, it was observed by several judicious persons, that the author's accounts of many things relating to civil and military architecture, machines and engines of war, &c. were, (as was unavoidable in describing such things) obscure, and in a manner unintelligible. He was sensible of this himself, in treating the Orders of architecture and the Roman camp; and therefore added the Plates of them, without which they could not be explaided.

To remove this Obscurity, and render this version the more perfect, the editors were

adviſed to have recourſe to the ſeveral works cited by Mr. Rollin. From theſe (*Perrault*'s *Vitruvius*, *Folard*'s *Polybius*, *Montfaucon*'s *Antiquities*, &c.) the plates in theſe volumes are engraven, and the explanations of them extracted in as brief a manner as poſſible; which, it is hoped, will not only anſwer the purpoſe they were intended for, but throw ſuch a new light into many parts of the preceding hiſtory, where the things they repreſent are mentioned, as will be equally uſeful and agreeable to the reader.

Dr. Richard Mead has been pleaſed to communicate an antient picture in his poſſeſſion, which was lately found at Rome, in the ruins of the palace of Auguſtus Cæſar, and ſuppoſed to be painted in his time, a Print from which, engraven by Mr. Baron, exactly the ſame ſize with the original, is inſerted in the ſection of painting. This print being a reverſe of the picture, occaſions the crown's appearing in the left hand of Auguſtus. The reaſon an account of it was not inſerted in the ſame place, is becauſe the original did not arrive from Italy, till this volume was almoſt printed off: And as the Latin inſcription at the bottom is the beſt explanation that can be given of it, it is neceſſary to inſert the following tranſlation of it in this place, for the uſe of the Engliſh reader.

"A

" A fragment of an antient painting in
" freſco, found anno 1737, in the ruins of
" the palace of Auguſtus Cæſar, in the gar-
" dens of Farneſe upon mount Palatine at
" Rome. It contains ſix figures exquiſitely
" painted in the moſt lively and beautiful
" colours; by one of which Auguſtus is re-
" preſented ſitting, and holding out a crown
" to ſome perſon, whoſe figure is broke off:
" the reſt repreſent the courtiers attending,
" amongſt whom are Mæcenas in an azure
" robe, and behind him M. Agrippa with
" his right hand upon the ſhoulder of the
" former; as appears from the reſemblance
" of theſe figures to their coins and gems.

THE AUTHOR TO THE READER

THE treating of the arts and sciences has carried me much farther than I imagined. I have repented more than once my having embarked in an undertaking, which required a great variety of knowledge, and that too in no common degree of perfection, to give a just, precise, and entire idea of the several subjects to which it extends. I soon discovered how unequal I was to the task, and have endeavoured to supply my own defects, by making the best use I could of the labours of such as are most expert in each art, that I might not lose myself in ways, of which some were little familiar, and others entirely unknown, to me.

I saw with secret joy the approaching end of my journey; not that I might abandon myself

myſelf to a ſoft and trivial inertion, inconſiſtent with an honeſt man, and ſtill more ſo with a chriſtian; but to enjoy a tranquillity and repoſe, which might admit me to devote the few days I have yet to live, ſolely to the ſtudies and exerciſes neceſſary to prepare me for that laſt moment, which is to determine my fate for evermore. I imagined, that, after having laboured more than fifty years for others, I might be permitted to take pains for the future only for myſelf, and to renounce entirely the ſtudy of profane authors, which may pleaſe the underſtanding, but are not capable of nouriſhing the ſoul. I was ſtrongly inclined to make a choice that appeared ſo ſuitable, and almoſt neceſſary to me.

However, the deſire of the public, of which I could not be ignorant, gave me ſome pauſe upon this head. I did not think proper to determine for myſelf, nor to take my own inclination for the rule of my conduct. I conſulted ſeparately ſeveral learned and wiſe friends, who all condemned me to undertake the Roman hiſtory: I mean that of the Republic. So unexpected a uniformity of ſentiments ſurprized me, and made it no longer difficult for me to comply with advice, which I conſidered as an aſſured token of the will of God in regard to me.

I ſhall begin this new work, as ſoon as I have finiſhed the other, which I am in hopes to

to do very ſpeedily*. At ſeventy-ſix years of age I have no time to loſe; not that I flatter myſelf with being able to compleat it, though I ſhall apply myſelf to it as much as my ſtrength and health will admit. Having only undertaken my firſt hiſtory, in diſcharge of the function, to which I conceived God had called me; that of beginning to form the hearts of youth, to give them the firſt tincture of virtue by the examples of the great men of the pagan world, and to lay thoſe firſt foundations for conducting them on to more ſolid virtue; I find myſelf more than ever obliged to have the ſame views in the hiſtory I am about to undertake. I ſhall endeavour not to forget, that God, in taking me off in the courſe of my work (for that I ought to expect) will not examine whether it be well or ill wrote, or received with, or without applauſe; but whether I compoſed it ſolely to pleaſe him, and render ſome ſervice to mankind. That thought will only augment my ardor and zeal, when I reflect for whom I take pains; and engage me to make new efforts, in order to anſwer the expectation of the public, improving as much as I can, from the good advice that has been kindly given me, in regard to my firſt hiſtory.

I have only to add, that I ſhould be much to be pitied, if I expected no other reward

* This hiſtory of the Roman republic is tranſlated into Engliſh.

for

for my long and laborious application, than the praiſes of this world. And yet who can flatter himſelf with being ſufficiently upon his guard againſt ſo grateful an illuſion? The labours of the pagans had no other view; and it is accordingly written of them: *Receperunt mercedem ſuam; Vani vanam,* adds one of the fathers, *They have received their reward, as vain as themſelves.* I ought much rather to propoſe to myſelf the example of that ſervant, who employs the whole induſtry and application in making the beſt uſe he can of the few talents his maſter has confided to him; in order to hear like him at the laſt day theſe words of conſolation, far ſuperior to all human praiſes: *Well done thou good and faithful ſervant, thou haſt been faithful over a few things; I will make the ruler over many things; enter thou into the joy of thy Lord.* Amen. Amen.

Mat. xxv. 21.

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Of ARTS and SCIENCES.

INTRODUCTION.

How useful the invention of arts and sciences has been to mankind. It ought to be attributed to God.

THE history of arts and sciences, and of the persons, who have most eminently distinguished themselves by them, to speak properly, is the history of human wit, which in some sense does not give place to that of princes and heroes, whom common opinion places in the highest degree of elevation and glory. I do not intend, by speaking in this manner, to strike at the difference of rank and condition, nor to confound or level the orders which God himself has instituted amongst men. He has placed princes, kings, and rulers of states over our heads, with whom he has deposited his authority; and after them generals of armies, ministers, magistrates, and all those with whom the sovereign divides the cares of government. The honours paid them, and the pre-eminence they possess, are no usurpation on their side. It is

the divine providence itſelf, that has aſſigned them their high ſtations, and demands ſubmiſſion, obedience, and reſpect for thoſe that ſit in its place.

But there is alſo another order of things, and, if I may be permitted to ſay ſo, another diſpoſition of the ſame providence, which, without regard to the firſt kind of greatneſs I have mentioned, eſtabliſhes a quite different ſpecies of eminence, in which diſtinction ariſes neither from birth, riches, authority, nor elevation of place; but from merit and knowledge alone. It is the ſame providence, that regulates rank alſo of this kind, by the free and entirely voluntary diſpenſation of the talents of the mind, which it diſtributes in what proportion, and to whom it pleaſes, without any regard to quality and nobility of perſon. It forms, from the aſſemblage of the learned of all kinds, a new ſpecies of empire, infinitely more extenſive than all others, which takes in all ages and nations, without regard to age, ſex, condition, or climate. Here the plebeian finds himſelf upon the level with the nobleman, the ſubject with the prince, nay, often his ſuperior.

The principal law and juſteſt title to deſerving ſolid praiſes in this empire of literature, is, that every member of it be contented with his own place; that he be void of all envy for the glory of others; that he looks upon them as his collegues, deſtined as well as himſelf, by providence, to enrich ſociety, and become its benefactors; and that he remembers, with gratitude, from whom he holds his talents, and for what ends they have been conferred upon him. For, indeed, how can thoſe, who diſtinguiſh themſelves moſt amongſt the learned, believe, that they have that extent of memory, facility of comprehending, induſtry to invent and make diſcoveries; that beauty, vivacity, and penetration of mind from themſelves; and, if they poſſeſs all theſe advantages from ſomething exterior, how can they

they assume any vanity from them? But can they believe they may use them at their own pleasure, and seek, in the application they make of them, only their own glory and reputation? As providence places kings upon their thrones solely for the good of their people, it distributes also the different talents of the mind solely for the benefit of the public. But in the same manner as we sometimes see in states usurpers, and tyrants, who, to exalt themselves alone, oppress all others; there may also arise amongst the learned, if I may be allowed to say so, a kind of tyranny of the mind, which consists in regarding the successes of others with an evil eye; in being offended at their reputation; in lessening their merit; in esteeming only one's self, and in affecting to reign alone: A hateful defect, and very dishonourable to learning. The solid glory of the empire of learning in the present question, I cannot repeat it too often, is not to labour for one's self, but for mankind; and this, I am so bold to say, is what places it exceedingly above all the other empires of the world.

The victories which take up the greatest part of history, and attract admiration the most, have generally no other effects, but the desolation of countries, the destruction of cities, and the slaughter of men. Those so much boasted heroes of antiquity, have they made a single man the better? Have they made many men happy? And if, by the founding of states and empires, they have procured posterity some advantage, how dearly have they made their cotemporaries pay for it, by the rivers of blood they have shed? Those very advantages are confined to certain places, and have a certain duration. Of what utility to us, at this day, are either Nimrod, Cyrus, or Alexander? All those great names, all those victories, which have astonished mankind from time to time; those princes and conquerors, with all their magnificence and vast designs, are

returned into nothing with regard to us; they are diſperſed like vapours, and are vaniſhed like phantoms.

But the inventors of arts and ſciences have laboured for all ages of the world. We ſtill enjoy the fruits of their application and induſtry. They have provided, at a great diſtance, for all our occaſions. They have procured for us all the conveniencies of life. They have converted all nature to our uſes. They have reduced the moſt indocile matter to our ſervice. They have taught us to extract from the bowels of the earth, and even from the deeps of the ſea, the moſt precious riches; and, what is infinitely more eſtimable, they have opened to us the treaſures of all the ſciences, and have guided us to knowledge the moſt ſublime, the moſt uſeful, and the moſt worthy of our nature. They have put into our hands, and placed before our eyes, whatever is moſt proper to adorn the mind, to direct our manners, and to form good citizens, good magiſtrates, and good princes.

Theſe are part of the benefits we have received from thoſe who have invented and brought arts and ſciences to perfection. The better to know their value, let us tranſport ourſelves in imagination back to the infancy of the world, and thoſe groſs ages, when man, condemned to eat his bread by the ſweat of his brow, was without aids and inſtruments, and obliged however to cultivate the earth, that he might extract nouriſhment from it; to erect himſelf huts and roofs for his ſecurity; to provide cloathing for his defence againſt the froſts and rains; and, in a word, to find out the means to ſatisfy all the neceſſities of life. What labours, what difficulties, what diſquiets! All which are ſpared us.

We do not ſufficiently conſider the obligations we are under to thoſe equally induſtrious and laborious men, who made the firſt eſſays in arts, and applied

applied themſelves in thoſe uſeful but elaborate reſearches. That we are commodiouſly houſed, that we are cloathed, that we have cities, walls, habitations, temples; to their induſtry and labour we are indebted for them all. It is by their aid our hands cultivate the fields, build houſes, make ſtuffs and habits, work in braſs and iron; and, to make a tranſition from the uſeful to the agreeable, that we uſe the pencil, handle the chiſſel and graver, and touch inſtruments of muſic; theſe are ſolid and permanent advantages and emoluments, which have always been increaſing from their origin; which extend to all ages and nations, and to all mankind in particular; which will perpetuate themſelves throughout all times, and continue to the end of the world. Have all the conquerors together done any thing, that can be imagined parallel with ſuch ſervices? All our admiration, however, turns generally on the ſide of theſe heroes in blood, whilſt we ſcarce take notice of what we owe to the inventors of arts.

But we muſt go farther back, and render the juſt homage of praiſe and acknowledgment to him, who alone has been, and was capable of being, their author. This is a truth confeſſed by the Pagans themſelves; and Cicero atteſts moſt expreſsly, that men have all the conveniencies of life from God alone: *Omnes mortales ſic habent, externas commoditates a diis ſe habere.* Lib. 3. De nat. deor. n. 86.

Pliny the naturaliſt explains himſelf ſtill in a ſtronger manner, where he ſpeaks of the wonderful effects of ſimples and herbs in regard to diſtempers; and the ſame principle may be applied to a thouſand other effects, which ſeem more aſtoniſhing than thoſe. * " It is, ſays he, to underſtand very ill the

* Quæ ſi quis ullo fortè ab homine excogitari potuiſſe credit, ingratè deorum munera intelligit——Quod certe caſu repertum quis dubitet? Hic ergo caſus, hic eſt ille, qui plurima in vita invenit Deus. Hoc habet nomen, per quem intelligitur eadem & parens rerum omnium & magiſtra natura. *Plin.*

" gifts of the divinity, and to repay them with " ingratitude, to believe them capable of being " invented by man. It is true, chance ſeems " to have given birth to theſe diſcoveries; but " that chance is God himſelf; by which name, " as well as by that of Nature, we are to under- " ſtand him alone, who is the great parent of all " things."

In effect, how little ſoever we reflect upon the relation and proportion which appears, for inſtance, between the works of gold, ſilver, iron, braſs, lead, and the rude maſs as it lies hid in the earth, of which they are formed; between linen cloth, whether fine and thin, or coarſe and ſtrong, and flax and hemp; between ſtuffs of all ſorts, and the fleece of ſheep; between the gloſſy beauty of wrought ſilks, and the deformity of an hideous inſect: we ought to aſſure ourſelves, that man, abandoned to his own faculties, could never have been able to make ſuch happy diſcoveries. It is true, as Pliny has obſerved, that chance has ſeemed to give birth to moſt inventions: But who does not ſee, that God, to put our gratitude to trial, takes pleaſure to conceal himſelf under thoſe fortuitous events, as under ſo many veils, through which our reaſon, whenever ſo little enlightened by faith, traces with eaſe the beneficent hand, which confers ſo many gifts upon us?

The divine providence ſhews itſelf no leſs in many modern diſcoveries, which now appear to us exceedingly eaſy; and however eſcaped, during all preceding ages, the knowledge and inquiries of the many perſons, always intent upon the ſtudy and perfection of arts; till it pleaſed God to open their eyes, and to ſhew them what they did not ſee before.

In this number may be reckoned both wind and water mills, ſo commodious for the uſes of life, which however are not very antient. The antients

engraved

engraved upon copper. Whence was it, that they never reflected, that, by impreſſing upon paper what they had engraved, they might write that in a moment, which they had been ſo long in cutting with a tool? It is, notwithſtanding, only about three hundred years ſince the art of printing books has been diſcovered. The ſame may be ſaid of gunpowder, of which our antient conquerors were in great want, and which would have very much abridged the length of their ſieges. The compaſs, that is to ſay, the needle touched with the loadſtone, ſuſpended upon an axis, is of ſuch wonderful uſe, that to it alone we ſtand indebted for the knowledge of the new world, and all the people of the earth are united by commerce. How came it, that mankind, who knew all the other properties of the loadſtone, were ſo long without diſcovering one of ſuch great importance?

We may conclude in the ſame manner, I think, not only in regard to the incredible difficulty of ſome diſcoveries, which do not offer themſelves by any outward appearances, and are, however, almoſt as old as the world; but from the extreme facility of other inventions, which ſeem to guide us to them, and yet have not been diſcovered till after many ages; that both the one and the other are abſolutely diſpoſed by the direction of a ſuperior Being, which governs the univerſe with infinite wiſdom and power.

We are indeed ignorant of the reaſons, which have induced God to obſerve a different conduct in the manifeſtation of theſe myſteries of nature, at leaſt in a great meaſure; but that conduct is, however, no leſs to be revered. What he ſuffers us ſometimes to ſee of it, ought to inſtruct us in reſpect to all the reſt. Chriſtopher Columbus conceives the deſign to go in ſearch of new worlds. He addreſſes himſelf, for that end, to ſeveral princes, who look upon his enterprize as madneſs,

and it ſeemed ſuch in effect. But he had within him, with regard to this enterprize, an inherent impulſe, an ardent and continual deſire, which rendered him paſſionate, reſtleſs, and invincible to all obſtacles and remonſtrances. Who was it, that inſpired him with this bold deſign, and gave him ſuch inflexible conſtancy, but God alone, who had reſolved from all eternity to enlighten the people of that new world with the lights of the goſpel? The invention of the compaſs was the occaſion of it. Providence had aſſigned a preciſe time for this great event. The moment could neither be advanced nor retarded. Hence it was that this diſcovery had been ſo long deferred, and was afterwards ſo ſuddenly and ſo courageouſly executed.

After theſe obſervations, which I thought uſeful to many of my readers, I ſhall proceed to my ſubject. I ſhall divide all that relates to the arts and ſciences into three books. In the firſt I ſhall treat of agriculture, commerce, architecture, ſculpture, painting, and muſic. In the ſecond, I ſhall treat of the art military, and what regards the raiſing and maintaining troops, battles, and ſieges, both by ſea and land. In the laſt book, with which my work will conclude, I ſhall run over the arts and ſciences, that have moſt relation to the mind: Grammar, poetry, hiſtory, rhetoric, and philoſophy, with all the branches that either depend on, or have any relation to them.

I muſt obſerve beforehand, with the ſame freedom I have profeſſed hitherto, that I undertake to treat a ſubject of which many parts are almoſt entirely unknown to me. For this reaſon, I ſhall have occaſion for new indulgence. I demand permiſſion therefore to make uſe freely, as I have always done, (and am now reduced to do more than ever) of all the helps I ſhall meet with in my way. I ſhall hazard loſing the glory of being an author and inventor: But I willingly renounce it, provided

provided I have that of pleaſing my readers, and of being any way uſeful to them. Profound Erudition muſt not be expected here, though the ſubject ſeems to imply it. I do not pretend to inſtruct the learned; my aim is to make choice of that from all the arts, which may beſt ſuit the capacities of the generality of readers.

THE

THE HISTORY OF THE ARTS and SCIENCES OF THE ANCIENTS, &c.

CHAPTER I.
Of AGRICULTURE.

ARTICLE I.

Antiquity of agriculture. Its utility. The eſteem it was in amongſt the antients. How important it is to place it in honour, and how dangerous to neglect the application to it.

I MAY with juſtice place agriculture at the head of the arts, which has certainly the advantage of all others, as well with regard to its antiquity as utility. It may be ſaid to be as antient as the world, having taken birth in the terreſtrial Paradiſe itſelf, when Adam, newly come forth from the hands of his Creator, ſtill poſſeſſed the precious but frail treaſure of his innocence; God, having placed him in the garden of delights, commanded him to cultivate it; *ut operaretur illum: to dreſs and keep it.* That culture was not painful and laborious, but eaſy and agreeable; it was to ſerve him Gen. ii. 15.

him for amuſement, and to make him contemplate in the productions of the earth the wiſdom and liberality of his Maſter.

The ſin of Adam having overthrown this order, and drawn upon him the mournful decree, which condemned him to eat his bread by the ſweat of his brow; God changed his delight into chaſtiſement, and ſubjected him to hard labour and toil; which he had never known, had he continued ignorant of evil. The earth, become ſtubborn and rebellious to his orders, to puniſh his revolt againſt God, brought forth thorns and thiſtles. Violent means were neceſſary to compel it to pay him the tribute, of which his ingratitude had rendered him unworthy, and to force it, by labour, to ſupply him every year with the nouriſhment, which before was given him freely and without trouble.

From hence therefore we are to trace the origin of agriculture, which, from the puniſhment it was at firſt, is become, by the ſingular goodneſs of God, in a manner the mother and nurſe of the human race. It is in effect the ſource of ſolid wealth and treaſures of a real value, which do not depend upon the opinion of men; which ſuffice at once to neceſſity and enjoyment, by which a nation is in no want of its neighbours, and often neceſſary to them; which make the principal revenue of a ſtate, and ſupply the defect of all others, when they happen to fail. Though mines of gold and ſilver ſhould be exhauſted, and the ſpecies made of them loſt; though pearls and diamonds ſhould remain hid in the womb of the earth and ſea; though commerce with ſtrangers ſhould be prohibited; though all arts, which have no other object than embelliſhment and ſplendor, ſhould be aboliſhed; the fertility of the earth alone would afford an abundant ſupply for the occaſions of the public, and furniſh ſubſiſtence both for the people, and armies to defend it.

We

We ought not to be ſurprized therefore, that agriculture was in ſo much honour amongſt the antients; it ought rather to ſeem wonderful that it ever ſhould ceaſe to be ſo, and that of all profeſſions the moſt neceſſary and moſt indiſpenſable ſhould have fallen into ſo great contempt. We have ſeen in the whole courſe of our hiſtory, that the principal attention of the wiſeſt princes, and the moſt able miniſters, was to ſupport and encourage huſbandry.

Amongſt the Aſſyrians and Perſians the Satrapæ were rewarded, in whoſe governments the lands were well cultivated, and thoſe puniſhed who neglected that part of their duty. Numa Pompilius, one of the wiſeſt kings antiquity mentions, and who beſt underſtood and diſcharged the duties of the ſovereignty, divided the whole territory of Rome into different cantons. An exact account was rendered him of the manner in which they were cultivated, and he cauſed the huſbandmen to come before him, that he might praiſe and encourage thoſe whoſe lands were well manured, and reproach others with their want of induſtry. The riches of the earth, ſays the hiſtorian, were looked upon as the juſteſt and moſt legitimate of all riches, and much preferred to the advantages obtained by war, which are of no long duration. Ancus Martius, the fourth king of the Romans, who piqued himſelf upon treading in the ſteps of Numa, next to the adoration of the gods, and reverence for religion, recommended nothing ſo much to the people, as the cultivation of lands, and the breeding of cattle. The Romans long retained this diſpoſition, and*in the latter times, whoever did not diſcharge this duty well, drew upon himſelf the animadverſion of the cenſor.

Dion. Halicarn. Antiq. Rom. l. 2. p. 135.

Id. l. 3. p. 177.

* Agrum malè colere Cenſorium probrum adjudicabatur. *Plin.* l. 18. c. 3.

It

It is known from never-failing experience, that the culture of lands, and the breeding of cattle, which is a conſequence and neceſſary part of it, has always been a certain and inexhauſtible ſource of wealth and abundance. Agriculture was in no part of the world in higher conſideration than in Egypt, where it was the particular object of government and policy: and no country was ever better peopled, richer, or more powerful. The ſtrength of a ſtate is not to be computed by extent of country, but by the number of its citizens, and the utility of their labour.

It is hard to conceive how ſo ſmall a tract as the land of Promiſe ſhould be able to contain and nouriſh an almoſt innumerable multitude of inhabitants: this was from the whole country's being cultivated with extreme application.

What hiſtory relates of the opulence of ſeveral cities in Sicily, and in particular of the immenſe riches of Syracuſe, of the magnificence of its buildings, of the powerful fleets it fitted out, and the numerous armies it had on foot, would appear incredible, if not atteſted by all the antient authors. From whence can we believe, that Sicily could raiſe wherewith to ſupport ſuch enormous expences, if not from the increaſe of their lands, which were improved with wonderful induſtry? We may judge of their application to the culture of land, from the care taken by one of the moſt powerful kings of Syracuſe, (Hiero II.) to compoſe a book upon that ſubject, in which he gave wiſe advice and excellent rules, for ſupporting and augmenting the fertility of the country.

Beſides Hiero, * other princes are mentioned, who did not think it unworthy their birth and rank to leave poſterity precepts upon agriculture; ſo ſenſible were they of its utility and value: Of this

* De cultura agri præcipere principale fuit, etiam apud exteros. *Plin.* l. 18. c. 3.

number

number were Attalus, ſirnamed Philometer, king of Pergamus, and Archelaus of Cappadocia. I am leſs ſurprized, that Plato, Xenophon, Ariſtotle, and other philoſophers, who have treated politics in particular, have not omitted this article, which makes an eſſential part of that ſubject. But who would expect to ſee a Carthaginian general amongſt theſe authors? I mean Mago. He muſt have treated this matter with great extent, as his work, which was found at the taking of Carthage, conſiſted of twenty-eight volumes. So high a value was ſet on it, that the ſenate ordered it to be tranſlated, and one of the principal magiſtrates took upon himſelf the care of doing it. Caſſius Dionyſius of Utica had before tranſlated it out of the Punic language into Greek. D. Syllanus. Varr. de re ruſt. l. 1. c. 1.

Cato, the cenſor, had however publiſhed his books upon the ſame ſubject. For Rome was not then entirely depraved, and the taſte for the antient ſimplicity ſtill continued in a certain degree. She remembered with joy and admiration, that in antient times her ſenators lived almoſt continually in the country; that they cultivated their lands with their own hands, without ever deviating into rapacious and unjuſt deſires of thoſe of other men; and that * conſuls and dictators were often taken from the plow. In thoſe happy times, ſays Pliny, † the earth, glorious in ſeeing herſelf cultivated by the hands of triumphant victors, ſeemed to make new efforts, and to produce her fruits with greater abundance; that is,

* Antiquitùs ab aratro arceſſebantur ut conſules fierent——Atilium ſua manu ſpargentem ſemen qui miſſi erant convenerunt——Suos agros ſtudiosè colebant, non alienos cupidè appetebant. *Cic. pro Roſc. Amer.* n. 50.

† Quæ nam ergo tantæ ubertatis cauſa erat? Ipſorum tunc manibus Imperatorum colebantur agri (ut fas eſt credere) gaudente terra vomere laureato, & triumphali aratore: ſive illi eâdem curâ ſemina tractabant, quâ bella, eâdemque diligentiâ arva diſponebant, quâ caſtra: ſive honeſtis manibus omnia lætiùs proveniunt, quoniam & curioſiùs fiunt. *Plin.* l. 18. c. 3.

no

no doubt, becauſe thoſe great men, equally capable of handling the plow and their arms, of ſowing and conquering lands, applied themſelves, with more attention to their labour, and were alſo more ſucceſsful in effect of it.

And indeed, when a perſon of condition, with a ſuperior genius, applies himſelf to arts, experience ſhews us, that he does it with greater ability, force of mind, induſtry, taſte, and with more inventions, new diſcoveries, and various experiments; whereas an ordinary man confines himſelf ſervilely within the common road, and to his antient cuſtoms. Nothing opens his eyes, nothing raiſes him above his old habitudes; and after many years of labour he continues ſtill the ſame, without making any progreſs in the profeſſion he follows.

Thoſe great men I have mentioned, had never undertaken to write upon agriculture, if they had not been ſenſible of its importance, which moſt of them had perſonally experienced. We know what a taſte Cato had for a rural life, and with what application he employed himſelf in it. The example of an antient Roman, whoſe farm adjoined to his, was of infinite ſervice to him. (This was Manlius Curius Dentatus, who had thrice received the honour of triumph.) Cato often went to walk in it, and conſidering the * ſmall extent of that land, the poverty and ſimplicity of the houſe, he was ſtruck with admiration for that illuſtrious perſon, who, when he became the greateſt of the Romans, having conquered the moſt warlike nations, and driven Pyrrhus out of Italy, cultivated this little land with his own hands, and, after ſo many triumphs, inhabited ſo wretched a houſe. Is it

* Hunc, & incomptis Curium capillis
Utilem bello tulit & Camillum
Sæva paupertas, & avitus apto
Cum lare fundus.

here,

here, * ſaid he to himſelf, that the ambaſſadors of the Samnites found him by his fire-ſide, boiling roots, and received this wiſe anſwer from him, after having offered him a great ſum of money: That gold was a thing of ſmall value to one who could be ſatisfied with ſuch a dinner; and that, for his part, he thought it more glorious to conquer thoſe who had that gold, than to poſſeſs it himſelf. Full of theſe thoughts, Cato returned home, and making an eſtimate of his houſe, lands, ſlaves, and expences, he applied himſelf to huſbandry with more ardor, and retrenched all needleſs ſuperfluity.

Though very young at that time, he was the admiration of all that knew him. Valerius Flaccus, one of the moſt noble and moſt powerful perſons of Rome, had lands contiguous to Cato's ſmall farm. He there often heard his ſlaves ſpeak of his neighbour's manner of living, and of his labour in the field. He was told, that in the morning he uſed to go to the ſmall cities in the neighbourhood, to plead and defend the cauſes of thoſe, who applied to him for that purpoſe. That from thence he returned into the field, where throwing a mean coat over his ſhoulders in winter, and almoſt naked in ſummer, he worked with his ſervants, and after they had done, he ſate down with them at table, and eat the ſame bread, and drank the † ſame wine.

We ſee by theſe examples how far the antient Romans carried the love of ſimplicity, poverty,

* Curio ad focum ſedenti magnum auri pondus Samnites cum attuliſſent repudiati ab eo ſunt. *Non enim aurum habere præclarum ſibi videri dixit, ſed iis qui haberent aurum imperare. Cicero makes Cato himſelf ſpeak thus, in his book upon old age,* n. 55.

† *This puts me in mind of a fine ſaying of Pliny the younger's, who gave his freedmen the ſame wine he drank himſelf. When ſomebody repreſented that this muſt be very chargeable to him: No, ſaid he; my freedmen don't drink the ſame wine I drink, but I the ſame they do.* Quia ſcilicet liberti mei non idem quod ego bibunt, ſed idem ego quod liberti. *Plin.* l. 2. *Epiſt.* 6.

Var. l. 3. c. 2. and labour. I read with ſingular pleaſure the tart and ſenſible reproaches, which a Roman ſenator makes to the augur Appius Claudius, upon the magnificence of his country-houſes, by comparing them to the farm where they then were. "Here, "ſaid he, we ſee neither painting, ſtatues, carving, "nor moſaic work; but, to make us amends, we "have all that is neceſſary to the cultivation of "lands, the dreſſing of vines, and the feeding of "cattle. In your houſe every thing ſhines with "gold, ſilver, and marble; but there is no ſign "of arable lands or vineyards. We find there "neither ox, nor cow, nor ſheep. There is neither "hay in cocks, vintage in the cellars, nor harveſt "in the barn, Can this be called a farm? In what "does it reſemble that of your grandfather, and "great-grandfather?"

After luxury was introduced to this height amongſt the Romans, the lands were far from being cultivated, or producing revenues as in antient days. * At a time when they were in the hands of ſlaves or abject mercenaries, what could be expected from ſuch workmen, who were forced to their labour only by ill treatment? This was one of the great, and moſt imprudent neglects, remarked by all the writers upon this ſubject in the latter times: becauſe to cultivate lands properly, it is neceſſary to take pleaſure and be delighted with the work, and for that end to find it for one's intereſt and gain to follow it.

It is therefore highly important, that the whole land of a kingdom ſhould be employed to the beſt advantage, which is much more uſeful than to extend its limits; in order to this each maſter of a family, reſiding in the ſmall towns and villages, ſhould have ſome portion of land appropriated to

* Nunc eadem illa (arva) vincti pedes, damnatæ manus, inſcrip i vultus exercenti——Nos miramur ergaſtulorum non eadem emolumenta eſſe, quæ fuerint Imperatorum. *Plin.* l. 18, c. 3.

himſelf;

himſelf; whence it would follow, that this field, by being his own, would be dearer to him than all others, and be cultivated with application; that his family would think ſuch employment their intereſt, attach themſelves to their farm, ſubſiſt upon it, and by that means be kept within the country. When the country-people are not in their own eſtates, and are only employed for hire, they are very negligent in their labour, and even work with regret. * A lord and land-holder ought to deſire, that their lands and eſtates ſhould continue a long time in the ſame family, and that their farmers ſhould ſucceed in them from father to ſon; from whence a quite different regard for them would ariſe: And what conduced to the intereſt of particulars, would alſo promote the general good of the ſtate.

But when an huſbandman or farmer has acquired ſome wealth by their induſtry and application, which is much to be deſired by the landlord for his own advantage; † it is not by this gain, ſays Cicero, the rents laid on them are to be meaſured, but by the lands themſelves, they turn ſo much to their account; the produce of which ought to be equitably eſtimated and examined into, for aſcertaining what new impoſition of rents they will bear. For to rack-rent and oppreſs thoſe who have applied themſelves well to their buſineſs, only becauſe they have done ſo, is to puniſh, and indeed to aboliſh, induſtry; whereas, in all well regulated ſtates, it has always been thought neceſſary to animate it by emulation and reward.

One reaſon of the ſmall produce of the lands, is, becauſe agriculture is not looked upon as an art

* Lucium Voluſium aſſeverantem audivi, patris familias fæliciſſimum fundum eſſe, qui colonos indigenas haberet, & tanquam in paterna poſſeſſione notois, jam inde a cunabulis longa familiaritate retineret. *Colum.* l. 1. c. 7.

† Cum Aratori aliquod onus imponitur, non omnes, ſi quæ ſunt præterea, facultates ſed arationis ipſius vis ac ratio conſideranda eſt, quid ea ſuſtinere, quid pati, quid efficere poſſit ac debeat. *Cic. Verr. de frum.* n. 199.

that requires ſtudy, reflections, and rules: every one abandons himſelf to his own taſte and method, whilſt no-body thinks of making a ſerious ſcrutiny into them, of trying experiments, and * of uniting precepts with experience. The antients did not think in this manner. They judged three things neceſſary to ſucceſs in agriculture. *The will:* this employment ſhould be loved, deſired, and delighted in, and followed in conſequence out of pleaſure. *The power:* it is requiſite to be in a condition to make the neceſſary expences for the breeding and fattening of cattle and fowl of all ſorts, for labour, and for whatever is neceſſary to the manuring and improving of lands; and this is what moſt of our huſbandmen want. *The ſkill:* it is neceſſary to have ſtudied maturely all that relates to the cultivation of lands, without which the two firſt things are not only ineffectual, but occaſion great loſſes to the maſter of a family, who has the affliction to ſee, that the produce of the land is far from anſwering the expences he has been at, or the hopes he had conceived from them; becauſe thoſe expences have been laid out without diſcretion, and without knowledge of the application of them. To theſe three heads a fourth may be added, which the antients had not forgot, that is, † *experience*, which preſides in all arts, is infinitely above precepts, and makes even the faults we have committed our advantage: for, from doing wrong, we often learn to do right.

Colum. l. 1. c. 1.

Agriculture was in quite different eſteem with the antients, to what it is with us: which is evident from the multitude and quality of the writers upon this ſubject. Varro cites to the number of fifty

* Debemus & imitari alios, & aliter ut faciamus quadam experientia tentare. *Varro.* l. 1. c. 18.

† Uſus & experientia dominantur in artibus, neque eſt ulla diſciplina in qua non peccando diſcatur. Nam ubi quid perperam adminiſtratum ceſſerit improſperè, vitatur quod fefellerat, illuminatque rectam viam docentis magiſterium. *Colum.* ibid.

amongſt

amongſt the Greeks only. He wrote upon it alſo himſelf, and Columella after him. The three Latin authors, Cato, Varro, and Columella, entered into a wonderful detail upon all the parts of agriculture. Would it be an ungrateful and barren employment to compare their opinions and reflections with the modern practice?

Columella, who lived in the time of Tiberius, deplores, in a very varm and eloquent manner, the general contempt into which agriculture was fallen in his time, and the perſuaſion men were under, that, to ſucceed in it, there was no occaſion for a maſter. Colum. in præem. l. 1.

" I ſee at Rome, ſaid he, the ſchools " of philoſophers, rhetoricians, geometricians, " muſicians, and, what is more aſtoniſhing, of peo- " ple ſolely employed, ſome in preparing diſhes " proper to pique the appetite, and excite glut- " tony; and others to adorn the head with artificial " curls, but not one for agriculture *. However, " the reſt might be well ſpared; and the republic " flouriſhed long without any of thoſe frivolous " arts; but it is not poſſible to want that of huſ- " bandry, becauſe life depends upon it.

" Beſides, is there a more honeſt or legal means " of preſerving, or increaſing, a patrimony? Is the " profeſſion of arms of this kind, and the acquiſi- " tion of ſpoils always dyed with human blood, " and amaſſed by the ruin of an infinity of per- " ſons? Or is commerce ſo, which, tearing citizens " away from their native country, expoſes them to " the fury of the winds and ſeas, and drags them " into unknown worlds in purſuit of riches? Or is " the trade † of money and uſury more laudable, " odious and fatal as they are, even to thoſe they " ſeem to relieve? Can any one compare any of

* Sine ludicris artibus—olim ſatis fælices fuere futuræque ſunt urbes; at ſine agricultoribus nec conſiſtere mortales, nec ali poſſe manifeſtum eſt.

† An fœneratio probabilior ſit etiam his inviſa quibus ſuccurrere videtur.

" theſe methods with wiſe and innocent agricul-
" ture, which only the depravity of our manners
" can render contemptible, and, by a neceſſary con-
" ſequence, almoſt barren and uſeleſs?

" Many people imagine, that the ſterility of our
" lands, which are much leſs fertile now than in
" times paſt, proceeds from the intemperance of
" the air, the inclemency of ſeaſons, or from the
" alteration of the lands themſelves, that, weak-
" ened and exhauſted by long and continual la-
" bour, are no longer capable of producing their
" fruits with the ſame vigour and abundance.
" This is a miſtake, ſays Columella: we ought
" not to imagine, that the earth, to whom the au-
" thor of nature has communicated a perpetual
" fecundity, is liable to barrenneſs, as to a kind
" of diſeaſe. After its having received from its
" maſter a divine and immortal youth, which has
" occaſioned its being called the common mother
" of all things, becauſe it always has brought
" forth, and ever will bring forth from its womb,
" whatever ſubſiſts, it is not to be feared, that it
" will fall into decay and old age like man. It is
" neither to the badneſs of the air, nor to length of
" time, that the barrenneſs of our lands is to be
" imputed; but ſolely to our own fault and neg-
" lect: we ſhould blame only ourſelves, who aban-
" don thoſe eſtates to our ſlaves, which, in the
" days of our anceſtors, were cultivated by the
" moſt noble and illuſtrious."

This reflection of Columella's ſeems very ſolid, and is confirmed by experience. The land of Canaan (and as much may be ſaid of other countries) was very fertile, at the time the people of God took poſſeſſion of it, and had been ſeven hundred years inhabited by the Canaanites. From thence to the Babyloniſh captivity was almoſt a thouſand years. In the latter days, there is no mention of its being exhauſted, or worn out by time, without

ſpeaking

ſpeaking of the after-ages. If therefore it has been almoſt entirely barren during a long courſe of years, as it is ſaid, we ought to conclude with Columella, that * it is not from its being exhauſted or grown old, but becauſe it is deſerted and neglected. And we ought alſo to conclude, that the fertility of ſome countries, of which ſo much is ſaid in hiſtory, ariſes from the particular attention of the inhabitants in tilling the land, in cultivating the vines, and breeding of cattle: which important article it is now expedient to conſider in a particular manner.

ARTICLE II.

Of tillage. Countries famous amongſt the antients for abounding with corn.

I Shall confine myſelf, in ſpeaking of tillage, to what relates to wheat, as the moſt important part of that ſubject.

The countries moſt famous for abounding in corn were Thrace, Sardinia, Sicily, Egypt, and Africa. Demoſt. in orat. cont. Lept. p. 546.

Athens brought every year only from Byzantium four hundred thouſand *medimni* of wheat, as Demoſthenes informs us. The *medimnus* contained ſix buſhels, and was ſold in his time for no more than five drachmas, that is to ſay, for fifty pence *French*. How many other cities and countries did Thrace furniſh with corn, and how fertile muſt it conſequently have been? Id. in Phorm. p. 346.

It is not without reaſon that * Cato the cenſor, whoſe gravity of manners occaſioned him to be ſir-

* Non igitur fatigatione, quemadmodum plurimi crediderunt, nec ſenio, ſed noſtra ſcilicet inertiâ minus benignè nobis arva reſpondent. *Colum.* l. 2. c. 2.

* Ille M. Cato Sapiens cellam penariam reip. noſtræ, nutricem plebis Romanæ Siciliam nominavit——Itaque ad omnes res Sicilia provincia ſemper uſi ſumus; ut, quicquid ex ſe poſſet afferre, id non apud eos naſci ſed domi noſtri conditum putaremus. *Cic. Verr.* c. 3. n. 5.

named *the Wife*, called Sicily the magazine and nurſing mother of the Roman people. And, indeed, it was from thence Rome brought almoſt all her corn, both for the uſe of the city, and the ſubſiſtence of her armies. We ſee alſo in Livy, that Sardinia ſupplied the Romans with abundance of corn.

All the world knows how much the land of Egypt, watered and enriched by the Nile, which ſerved it inſtead * of the huſbandman, abounded with corn. When Auguſtus had reduced it into a Roman province, he took particular care of the bed and canals of this beneficent river, which by degrees had been clogged with mud, through the neglect of the kings of Egypt, and cauſed them to be cleanſed by the Roman troops, whom he left there. From thence came regularly every year twenty millions of buſhels of wheat. Without this ſupply, the capitol of the world was in danger of periſhing by famine. She ſaw herſelf in this condition under Auguſtus, for there remained only three days proviſion of corn in the city. That prince, who was full of tenderneſs for the people, had reſolved to poiſon himſelf, if the expected fleets did not arrive before the expiration of that time. They came, and the preſervation of the people was attributed to the good fortune of the prince. We ſhall ſee, that wiſe precautions were afterwards taken to avoid the like danger for the future.

Sext. Aurel. Vict. in epito.

Africa did not give place to Egypt in point of fertility. In one of its countries, one buſhel of wheat ſown has been obſerved to produce an hundred and fifty. From a ſingle grain almoſt four hundred ears would ſometimes ſpring up, as we find by letters to Auguſtus and Nero, from thoſe who governed Africa under them. This was no doubt very uncommon. But the ſame Pliny, who

Plin. l. 18. c. 8.

* Nihil ibi coloni vice fungitur. *Plin.*

relates

relates these facts, assures us, that in Bœotia and Egypt it was a very common thing for a grain to produce an hundred and fifty ears; and he observes, upon this occasion, the attention of the divine providence, which hath ordained, that of all the plants that which it had appointed for the nourishment of man, and in consequence the most necessary, should be also the most fruitful.

I have said, that Rome at first brought almost all her corn from Sicily and Sardinia. In process of time, when she had made herself mistress of Carthage and Alexandria, Africa and Egypt became her store-houses. Those cities sent numerous fleets every year, freighted with wheat for the use of the people, then lords of the universe. And, when the harvest happened to fail in one of these provinces, the other came in to its aid, and supported the capitol of the world. Corn, by this means, was at a very low price at Rome, and sometimes sold for no more than two *asses*, or pence, a bushel. The whole coast of Africa abounded exceedingly with corn, in which part of the wealth of Carthage consisted. The city of Leptis only, situated in the lesser Syrtis, paid a daily tribute to it of a talent, that is to say, of three thousand livres. In the war against Philip, the Carthaginian ambassadors supplied the Romans with a million of bushels of corn, and five hundred thousand of barley. Those of Massiniſſa gave them also as much.

Liv. l. 31. n. 50. Id. l. 35. n. 62. Id. l. 43. n. 6.

Constantinople was supplied in the same manner, when the seat of empire was transplanted thither. An admirable order was observed in both these cities, for subsisting the immense number of people that inhabited them. The emperor Constantine caused almost fourscore thousand bushels of corn, which came from Alexandria, to be distributed daily at Constantinople; this was for the subsistence of six hundred and forty thousand men, the Roman bushel serving only eight men. When the

Socrat. l. 2. c. 13.

emperor

Ælian. Spartian. in Sever.

emperor Septimus Severus died, there was corn in the public magazines for seven years, expending daily seventy-five thousand bushels, that is to say, bread for six hundred thousand men. What a provision was this against the dearth of any future years!

Besides these I have mentioned, there were many other countries very fruitful in corn.

Cic. in Verr. de frum. n. 112. Plin. l. 18. c. 7.

For the sowing of an acre only one *medimnus* of corn was required: *Medimnum.* The *medimnus* consisted of six bushels, each of which contained very near twenty pounds weight of corn. (It is observed, in the *Spectacle de la Nature*, that the usual and sufficient quantity for sowing an acre is an hundred and twenty pounds of corn: which comes to the same amount.) The highest produce of an acre was ten *medimni* of corn, that is to say, ten for one; but the ordinary produce was eight, with which the husbandmen were well satisfied. It is from Cicero we have this account; and he must have known the subject very well, as he uses it in the cause of the Sicilians against Verres. He speaks of the country of the Leontines, which was one of the most fruitful in Sicily. The highest price of a bushel of corn amounted to three Sesterces, or seven pence half-penny. It was less than that of France by almost one fourth. Our Septier contains twelve bushels, and is often sold for ten livres. By that estimate our bushel is worth sixteen pence, and something more; that is to say, twice the price of the bushel of the antients, and something more.

Cic. ibid. n. 173.

All that Cicero relates upon the subject of corn, as to its price, how much of it was necessary for sowing an acre, and what quantity it produced being sown, ought not to be considered as an established rule; for that might vary considerably according to soils, countries, and times.

The

The antients had different methods of threſhing their corn; they made uſe, for that purpoſe, either of ſledges armed with points; or of horſes, which they made trample upon it; or of flails, with which they beat the ſheaves, as is now cuſtomary in many places. Plin. l. 18. c. 30.

They alſo uſed various methods for preſerving corn a great while, eſpecially by ſhutting it up cloſe in the ear in ſubterranean caverns, which they covered on all ſides with ſtraw, to defend it againſt damps; cloſing the entrance with great care, to prevent the air from getting in. Varro aſſures us, that corn would keep good in that manner for fifty years. Lib. 1. de re ruſt. c. 5.

ARTICLE III.

SECT I.

Cultivation of the vine. Wines celebrated in Greece and Italy.

WE may believe, that mankind have been no leſs induſtrious in the cultivation of the vine, than in that of corn, though they applied themſelves to it later. The Scripture informs us, that the uſe of wine was not known till after the deluge: *Noah began to be an huſbandman, and he planted a vineyard.* It was, no doubt, known before, but only in the grape, and not as liquor. Noah planted it by order, and diſcovered the uſe that might be made of the fruit, by preſſing out and preſerving the liquor. He was deceived by its ſweetneſs and ſtrength, which he had not experienced: *And he drank of the wine and was drunken.* The Pagans transferred the honour of the invention of wine to Bacchus, of which they never had much knowledge; and what is ſaid of Noah's drunkenneſs, Gen. ix. 20.

drunkenneſs, made them conſider Bacchus as the god of drunkenneſs and debauch.

The offspring of Noah, having diſperſed into the ſeveral countries of the world, carried the vine with them from place to place, and taught the uſe to be made of it. Aſia was the firſt that experienced the ſweetneſs of this gift, and ſoon imparted it to Europe and Africa. We ſee in Homer, that in the time of the Trojan war, part of the commerce conſiſted in the freight of wines.

Iliad. l. 7.

The wine was kept in thoſe days in large earthen jars, or in the ſkins of beaſts, which cuſtom continues to this day in countries where wood is not in plenty. It is believed that we are indebted to the Gauls, that ſettled on the banks of the Po, for the uſeful invention of preſerving our wine in veſſels of wood exactly cloſed, and for retaining it with in bounds, notwithſtanding its fermentation and ſtrength. From that time the keeping and tranſporting it became more eaſy, than when it was kept in earthen veſſels, which were liable to be broke; or in bags of ſkin, apt to unſew, or grow mouldy.

Odyſſ. l. 9. v. 197.

Homer mentions a very famous wine of Maronæ in Thrace, which would bear mixing with twenty times as much water. But it was common for the natives to drink it unmixed. * Nor have authors been ſilent upon the exceſſive brutalities, to which that nation were ſubject. Pliny tells us, that † Mucianus, who had been thrice Conſul, being in that country in his own time, had experienced the truth of what Homer ſays, and ſeen, that in a certain meaſure of wine they put fourſcore times as

Plin. l. 14. c. 4.

* Natis in uſum lætitiæ ſcyphis
Pugnare Thracum eſt.
HOR. *Od.* 27. l. 1.
With bowls for mirth and joy deſign'd
To fight beſits the Thracian kind.

† *This was the celebrated Mucianus, who had ſo much ſhare in the election of Veſpaſian to the empire.*

much

much water; which is four times as much as the Grecian poet ſpeaks of.

The ſame author mentions wines much celebrated in Italy, which took their name from Opimius, in whoſe conſulate they were made, which were preſerved to his time, that is, almoſt two hundred years, and were not to be purchaſed for money. A very ſmall quantity of this, mingled with other wines, communicated to them, as was pretended, a very ſurprizing ſtrength and exquiſite flavour. * How great ſoever the reputation of the wines, made in the conſulate of Opimius might be, or in that of Anicius, for the latter were much cried up, Cicero ſet no ſuch great value upon them; and above an hundred years before Pliny writes, he found them too old to be ſupportable. Plin. l. 14. c. 4.

Greece and Italy, which were diſtinguiſhed in ſo many other reſpects, were particularly ſo, by the excellency of their wines.

In Greece, beſides many others, the wines of Cyprus, Leſbos, and Chio, were much celebrated. Thoſe of Cyprus are in great eſteem to this day. † Horace often mentions thoſe of Leſbos, and repreſents them as very wholeſome and agreeable. But Chio carried it from all the other countries, and eclipſed their reputation ſo much, that the inhabitants of that iſland were thought to be the firſt who planted the vine, and taught the uſe of it to other nations. ‡ All theſe wines were in ſo great eſteem, and of ſo high a price, that at Rome, ſo late as to the in- Athen. l. 1. p. 26, 32.

* Atqui eæ notæ ſunt optimæ credo; ſed nimia vetuſtas nec habet eam, quam quærimus, ſuavitatem, nec eſt ſanè jam tolerabilis. *Cic. in Brut.* n. 287.

† Hic innocentis pocula Leſbii
Duces ſub umbra, *Od.* 7. l. 1.
Beneath the ſhade you here may dine,
And quaff the harmleſs Leſbian wine.

‡ Tanta vino Græco gratia erat, ut ſingulæ portiones in convictu darentur.——L. Lucullus puer apud patrem nunquam lautum convivium vidit, in quo plus ſemel Græcum vinum daretur. *Plin. ex Varro*, l. 14. c. 14.

fancy

fancy of Lucullus, in their greateſt entertainments they drank only one cup of them at the end of the feaſt. Their prevailing qualities were ſweetneſs and a delicious flavour.

Plin. l. 14. c. 12. Pliny was convinced, that the libations of milk inſtituted by Romulus, and Numa's prohibition to honour the dead by pouring wine upon the funeral pile, were proofs that in thoſe days vines were very ſcarce in Italy. They increaſed conſiderably in the following ages; and it is very probable, the Romans were obliged to the Greeks, whoſe vines were in high repute, on that account; as they were, in proceſs of time alſo, for their taſte for arts and ſciences. It was * the wines of Italy, in the times of Camillus, that brought the Gauls again thither. The charms of that liquor, which was entirely new to them, were powerful attractions to induce them to quit their country.

Two thirds of all the places famed for the goodneſs of wine were in Italy. † The antient cuſtom of that country, which it ſtill retains, was to faſten their ‡ vines to trees, and eſpecially to the poplar, to the tops of which they projected their ſlender circling-branches: this had a very fine effect, and was a moſt agreeable object to the eye. In ſeveral places they made uſe of props as we do.

* Eam gentem (Gallorum) traditur fama, dulcedine frugum, maximéque vini nova tum voluptate captam, Alpes tranſiſſe. *Liv.* l. 5. n. 33.

† In Campano agro vites populis nubunt, maritoſque complexæ atque per ramos earum procacibus brachiis geniculato curſu ſcandentes, cacumina æquant. *Plin.* l. 14. c. 1.

‡ *From this cuſtom three elegant expreſſions in Horace take birth, all derived from the ſame metaphor. He ſays, he* marries *the trees to the vines.* Epod. 2.

Ergo aut adulta vitium propagine
Altas maritat populos.

He calls the ſame trees widowers, *when the vines are no longer faſtened to them.* Od. 5. l. 4. Aut vitem viduas ducit ad arbores. *And gives the name of* batchelors *to the trees which never had the vine annexed to them:* Platanuſque cælebs evincet ulmos. *Od.* 15. l. 2.

The

The country of Capua alone ſupplied them with the Maſſic, * Calenian, Formian, Cæcuban, and Falernian, ſo much celebrated by Horace. It muſt be allowed, that the goodneſs of the ſoil, and the happy ſituation of all thoſe places, contributed very much to the excellency of theſe wines; but we muſt alſo admit, that they owed it more to the care and induſtry of the huſbandmen, who applied themſelves with the utmoſt attention to the cultivation of the vines. The proof of which is, that in † Pliny's time, which was about an hundred years after Horace, the reputation of theſe wines, formerly ſo famous, was entirely come to nothing, through the negligence and ignorance of the vine-dreſſers, who, blinded by the hope of gain, were more intent upon having a great quantity, than good wine.

Pliny cites ſeveral examples of the extreme difference which cultivation will produce in the ſame land. Amongſt others, he tells us of a celebrated Grammarian, who lived in the reign of Tiberius and Claudius, and purchaſed a vineyard at a ſmall price, which had long been neglected by its antient maſters. The extraordinary care he took of it, and the peculiar manner in which he cultivated it, occaſioned a change in a few years, that ſeemed little leſs than a prodigy; *ad vix credibile miraculum perduxit*. So wonderful a ſucceſs, in the midſt of other vineyards, which were almoſt always barren, drew upon him the envy of all his neighbours; Lib. 14. c. 3.

* Cæcubum, & prælo domitam Caleno
Tu bibes uvam: mea nec Falernæ
Temperant vites, neque Formiani
Pocula colles. *Od.* 20. l. 1.
Cæcubus and Calenum join
To fill thy bowls with richeſt wine:
My humble cups do not produce
The Formian or Falernian juice.

† Quod jam intercidit incuria coloni——Cura, culturaque id contigerat. Exoluit hoc quoque culpa (Vinitorum) copiæ potius quam bonitati ſtudentium. *Plin.* l. 14. c. 6.

who,

who, to cover their own ſloth and ignorance, accuſed him of magic and ſorcery.

Athen. l. 1. p. 26. Amongſt the vines of Campania, which I have mentioned, the Falernian was in great vogue. It was very ſtrong and rough, and was not to be drank till it had been kept ten years. To ſoften that roughneſs, and qualify its auſterity, they made uſe of honey, or mingled it with Chio, and by that mixture made it excellent. This ought, in my opinion, to be aſcribed to the refined and delicate taſte of thoſe voluptuous Romans, who, in the latter times, ſpared nothing to exalt the pleaſures of the table, by whatever was moſt agreeable, and moſt capable of gratifying the ſenſes. There were other Falernian wines more temperate and ſoft, but not ſo much eſteemed.

Athen. l. 10. p. 429. The antients, who ſo well knew the excellency of wine, were not ignorant of the dangers attending too free an uſe of it. I need not mention the law of Zaleucus, by which the Epizephyrian Locrians were univerſally forbid the uſe of wine upon pain of death, except in caſe of ſickneſs. The inhabitants of Marſeilles and Melitus ſhewed more moderation and indulgence, and contented themſelves with prohibiting it to women. At * Rome in the early ages, young perſons of liberal condition were not permitted to drink wine till the age of thirty; but as for the women, the uſe of it was abſolutely forbid to them; and the reaſon of that prohibition was, becauſe intemperance of that kind might induce them to commit the moſt exceſſive crimes. Seneca complains bitterly, that this cuſtom was almoſt univerſally violated in his times. The † weak and delicate complexion of the women, ſays

* Vini uſus olim Romanis fœminis ignotus fuit, ne ſcilicet in aliquod dedecus prolaberentur: quia proximus a libero patre intemperantiæ gradus ad inconceſſam venerem eſſe conſuevit. *Val. Max.* l. 1. c. 1.

† Non minùs, pervigilant, non minus, potant; & mero viros provocant.

he,

he, is not changed; but their manners are changed, and no longer the ſame. They value themſelves upon carrying exceſs of wine to as great an height as the moſt robuſt men. Like them they paſs whole nights at tables, and, with a full glaſs of unmixed wine in their hands, they glory in vying with them, and, if they can, in overcoming them.

The emperor Domitian paſſed an edict in relation to wine, which ſeemed to have a juſt foundation. One year having produced abundance of wine, and very little corn, he believed they had more occaſion for one than for the other, and therefore decreed, that no more vines ſhould be planted in Italy; and that, in the provinces, at leaſt one half of the vines ſhould be rooted up. Philoſtratus expreſſes himſelf, as if the decree ordained, that they ſhould all be pulled up, at leaſt in Aſia; becauſe, ſays he, the ſeditions, which aroſe in the cities of that province, were attributed to wine. All Aſia deputed Scopelianus to Rome upon that occaſion, who profeſſed eloquence at Smyrna. He ſucceeded ſo well in his remonſtrances, that he obtained not only, that vines ſhould continue to be cultivated, but that thoſe who neglected to do ſo, ſhould be laid under a fine. It is believed, that his principal motive for aboliſhing his edict was the diſperſing of papers with two Greek verſes in them, ſignifying, that, let him do what he would, there would ſtill remain wine enough for the ſacrifice, in which an emperor ſhould be the offering.

Sueton. in Domit. c. 7.

Philoſt. vit. Apol. lon. l. 6. c. 7.

Sueton. in Domitian. c. 14.

I ſeems, however, ſays Mr. Tillemont, that his edict ſubſiſted throughout the greateſt part of the weſt to the reign of Probus; that is, almoſt two hundred years. That emperor, who after many wars had eſtabliſhed a ſolid peace in the empire, employed the troops in many different works, uſeful to the public; to prevent their growing enervated through ſloth, and that the ſoldier might not eat his pay without deſerving it. So that as Han-

nibal had formerly planted the whole country of Africa with olive-trees, left his ſoldiers, for want of ſomething to do, ſhould form ſeditions; Probus, in like manner, employed his troops in planting vines upon the hills of Gaul, Pannonia, Mæſia, and in many other countries. He permitted in general the Gauls, Pannonians, and Spaniards, to have as many vines as they thought fit; whereas, from the time of Domitian, that permiſſion had not been granted to any nation of the world.

SECT. II.

Produce of the vines in Italy in Columella's time.

BEFORE I conclude this article upon vines, I cannot omit extracting a paſſage of Columella, which explains what profit was made of them in his time. He enters, for this purpoſe, into a detail, which ſeemed ſufficiently curious to me, and makes an exact calculation of the expence and produce of a vineyard of ſeven acres. His deſign is to prove, that the cultivation of vines is more beneficial than any other kind of huſbandry, and than that of corn itſelf. That might be true in his times, but it is not ſo in ours, at leaſt in the general opinion. This difference ariſes, perhaps, from the various accidents to which the vine is ſubject in France, froſts, rains, blights, which are not ſo much to be apprehended in hot countries. To theſe may be added the high price of caſks in plentiful years, which ſwallows up the greateſt part of the vine-dreſſer's profit; and the cuſtoms, which very much diminiſh the price of wines. Even amongſt the antients, all were not of Columella's opinion. * Cato, indeed, gave vines the firſt rank,

* Cato quidem dicit [primum agrum eſſe] ubi vineæ poſſunt eſſe bono vino & multo——Alii dant primatum bonis pratis—Vineam ſunt qui putent ſumptu fructum devorare. *Varr. de re ruſtic.* l. 1. c. 7, 8.

but

but thoſe only which produced the moſt excellent liquor, and in great abundance. With the ſame conditions we ſtill think in the ſame manner. Many gave the preference to paſture lands; and their principal reaſon was, that the charges in the culture of vines were almoſt equal to their produce.

I. *The charges neceſſary for ſeven acres of vines.*

Theſe are,	*livres.*
1. For the purchaſe of a ſlave, whoſe labour ſufficed for the cultivation of ſeven acres of vines, eight thouſand ſeſtertii	1000
2. For a land of ſeven acres, ſeven thouſand ſeſtertii	875
3. For the props and other neceſſary expences for ſeven acres, fourteen thouſand ſeſtertii	1750
Theſe three ſums, added together, amount to twenty-nine thouſand ſeſtertii	3625
4. For the intereſt of the aforeſaid ſum of twenty-nine thouſand ſeſtertii for two years, during which the land does not bear, and the money lies dead, three thouſand four hundred and fourſcore ſeſtertii	486
The total of the expence amounts to thirty-two thouſand, four hundred and eighty ſeſtertii	4060

II. *Produce of ſeven acres of vines.*

The yearly produce of ſeven acres of vines is ſix thouſand three hundred ſeſterces: that is, ſeven hundred fourſcore and ſeven livres ten ſols. Of which what follows is the proof.

The *Culeus* is a meaſure which contains twenty *amphoræ*, or forty *urnæ*. The *Amphora* contains twenty-ſix quarts, and ſomewhat more. The *Culeus*,

in conſequence, contains five hundred and twenty quarts, which make two hogſheads of the Paris meaſure, wanting fifty-ſix quarts.

The loweſt value of the *Culeus* is three hundred ſeſtertii; that is to ſay, thirty ſeven livres ten ſols. The leaſt produce of each acre was three *Culei*, which were worth nine hundred ſeſtertii, * or an hundred and twelve livres ten ſols. The ſeven acres therefore produced a profit of ſix thouſand three hundred ſeſtertii, which make ſeven hundred fourſcore and ſeven livres ten ſols.

The intereſt of the total expence, which is thirty-two thouſand four hundred and fourſcore ſeſtertii, that is, four thouſand and ſixty livres; this intereſt, I ſay, at ſix *per cent. per annum*, amounts to one thouſand, nine hundred and forty-four ſeſtertii, or ſomething more, or two hundred and forty
243 *l.* three livres. The intereſt of the ſame ſum, ariſing from the annual produce of a vineyard of ſeven
787 *l.* acres, is ſix thouſand three hundred ſeſtertii; that is, ſeven hundred fourſcore and ſeven livres ten pence. From whence may be ſeen, how much the latter intereſt exceeds the former, which was, however, the common intereſt of money. This is what Columella would prove.

Vivi radices. Beſides this produce, Columella reckons another profit ariſing from *Layers*. The layer is a young ſhoot or branch of a vine, which is ſet in the earth, where it takes root in order for the propagation of the plant. Each acre produced yearly ten thouſand of theſe layers at leaſt, which ſold for three thouſand ſeſtertii, or three hundred and ſeventy-five livres. The layers produced therefore from the ſeven acres, twenty-one thouſand ſeſtertii, or two thouſand ſix hundred and twenty livres. Columella computes the produce of theſe layers at the loweſt value; for

* *Columella obſerves, that each acre of Seneca's vineyards produced eight* Culei, l. 3. c. 3. *And Varro, that in many places an acre produced from ten to fifteen,* l. 1. c. 2.

as

as to himself, he assures us, his own vineyards produced regularly twice as much. He speaks only of the vines of Italy, and not of those of other provinces.

Adding the produce of the wine to that of the plants or layers, the profit upon seven acres of vines amounted to three thousand four hundred livres.

The produce of these layers, unknown to our vine-dressers, proceeded, no doubt, from the vines being very rare in a great number of provinces; and, the reputation of the vines of Italy having spread universally, people came from all parts to buy those layers, and to enable themselves, by their means, to plant good vineyards in places which had none before, or which had only such as were indifferent.

ARTICLE IV.

Of the breeding of cattle.

I Have said, that the breeding of cattle is a part of agriculture. It certainly is an essential part of it, not only because cattle, from the abundance of the dung, supply the earth with the manure, which is necessary to the preservation and renovation of its vigour, but because they share with man in the labours of husbandry, and spare him the greatest part of the toil. * Hence it was that the ox, the laborious companion of man in tilling the ground, was so highly considered by the antients, that whoever had killed one of them, was punished with death, as if he had killed a citizen; no doubt, because he was esteemed a sort of murtherer of the human race, whose nourishment and life stand in absolute need of the aid of this animal.

* Bos laboriosissimus hominis socius agricultura cujus tanta fuit apud antiquos veneratio, ut tam capitale esset bovem necesse quam civem. *Colum. in præf.* l. 6.

The * farther we look back into antiquity, the more we are assured, that in all nations the breeding of cattle produced considerable revenues, without speaking of Abraham, whose numerous family of domestics shews the multitude of his flocks and herds, or of his kinsman Laban; the holy Scripture observes, that the greatest part of Job's riches consisted in cattle; and that he possessed seven thousand sheep, three thousand camels, five hundred yoke of oxen, and five hundred she-asses.

Job i. 3.

It was by this the land of Promise, though of very moderate extent, enriched its princes, and the inhabitants of the country, whose numbers were incredible, amounting to more than three millions of souls, including women and children.

2 Kings iii. 4.

We read that Ahab, king of Israel, imposed an annual tribute upon the Moabites, whom he had conquered, of an hundred thousand sheep. How much must this number have multiplied in a short time, and what abundance occasioned throughout the whole country!

2 Chron. xxvi. 10.

The holy Scripture, in representing Uzziah as a prince accomplished for every part of a wise government, does not fail to inform us, that he had a great number of husbandmen and vineyards, and that he fed abundance of cattle. He caused great inclosures to be made in the countries, and vast houses for fothering the flocks and herds, with lodges, fortified with towers, for the shepherds to retire to with their flocks, and to secure them against irruptions; he also took care to have great numbers of cisterns cut for watering the flocks; works not so splendid, but no less estimable than the most superb palaces. It was, without doubt, the particular protection, which he gave to all who were employed in the cultivation of lands, or the

* In rusticatione vel antiquissima est ratio pascendi, eademque & quæstuosissima. *Ibid.*

breeding

breeding of cattle, that rendered his reign one of the moſt opulent Judæa had ever ſeen. And he did thus, ſaith the Scripture, *becauſe he loved huſbandry: Erat enim homo agriculturæ deditus.* The text is ſtill ſtronger in the Hebrew; *quia diligebat terram, becauſe he loved the ground.* He took delight in it; perhaps cultivated it with his own hands; at leaſt, he made huſbandry honourable, he knew all the value of it, and was ſenſible that the earth, manured with diligence and ſkill, was an aſſured ſource of riches both to the prince and people; he therefore thought attention to huſbandry one of the principal duties of the ſovereignty, though often the moſt neglected.

The Scripture ſays alſo of the holy King Hezekiah, *Moreover he provided him cities and poſſeſſions of flocks and herds in abundance, for God had given him ſubſtance very much.* It is eaſy to conceive, that the ſhearing of ſheep alone, without mentioning other advantages from them, could not but produce a very conſiderable revenue in the country, where an almoſt innumerable multitude were continually fed. And hence we find, that the time for ſhearing of ſheep was a ſeaſon of feſtivity and rejoicing. 2 Chron. xxxii. 29.

Amongſt the antient Pagans, the riches of the kings conſiſted in cattle; as we find from Latinus in Virgil, and Ulyſſes in Homer. It was the ſame amongſt the Romans, who, by the antient laws, did not pay fines in money, but in oxen and ſheep.

We muſt not be ſurpriſed, after having conſidered the great advantages produced by the breeding and feeding of cattle, that ſo wiſe a man as Varro has not diſdained to give us an extenſive account of all the beaſts that are of any uſe to the country, either for tillage, breed, or for carriage, and the other conveniencies of man. He ſpeaks firſt of ſmall cattle, ſheep, goats, and hogs: *greges.* He proceeds next to the large beaſts, oxen, aſſes, horſes, and camels: *armenta.* And he concludes with

fowl, which may be called domeſtic animals, *villaticæ pecudes*; pigeons, turtle-doves, fowls, geeſe, and many others. Columella enters into the ſame detail; and Cato the cenſor runs over part of it. The latter, upon being aſked what was the ſureſt and ſhorteſt method to enrich a country, replied, the feeding of cattle, which is attended with an infinity of advantages to thoſe who apply themſelves to it with diligence and induſtry.

Columel. præf. l. 6.

And, indeed, the beaſts, that labour in the field, render mankind continual and important ſervices; and the advantages he reaps from them, do not conclude even with their lives. They ſhare with him, or rather ſpare him the moſt laborious part of the work, without which the earth, however fruitful in itſelf, would continue barren, and not produce him any increaſe. They ſerve him in bringing home with ſafety into his houſe, the riches he has amaſſed without doors, and to carry him on his journies. Many of them cover his table with milk, cheeſe, wholeſome food, and even the moſt exquiſite diſhes; and ſupply him with the rich materials of the ſtuffs he is in want of for cloathing himſelf, and with a thouſand other conveniencies of life.

We ſee, from what has been ſaid hitherto, that the country covered with corn, wine, flocks, and herds, is a real Peru to man, and a much more valuable and eſtimable one, than that from whence he extracts gold and ſilver, which, without the other, would not preſerve him from periſhing with hunger, thirſt, and cold. Placed in the midſt of a fertile territory, he beholds around him at one view all his riches; and, without quitting his little empire, he finds immenſe and innocent treaſures within his reach. Theſe he regards, no doubt, as gifts from the liberal hand of that ſupreme Maſter, to whom he is indebted for all things; but he regards them alſo as the fruits of his own labour, and that renders them ſtill more grateful to him.

SECT.

SECT. V.

Innocency and pleaſure of a rural life, and of agriculture.

THE revenues and profits which ariſe from the culture of lands, are neither the ſole, nor the greateſt advantage accruing from it. All the authors, who have wrote upon * rural life, have always ſpoken of it with the higheſt praiſes, as of a wiſe and happy ſtate, which inclines a man to juſtice, temperance, ſobriety, ſincerity, and, in a word, to every virtue; which in a manner ſhelters him from all paſſions, by keeping him within the limits of his duty, and of a daily employment, that leaves him little leiſure for vices: luxury, avarice, injuſtice, violence, and ambition, the almoſt inſeparable companions of riches, take up their ordinary reſidence in great cities, which ſupply them with the means and occaſions: the hard and laborious life of the country does not admit of theſe vices. This gave room for the poets to feign, that Aſtræa, the goddeſs of juſtice, had her laſt reſidence there, before ſhe intirely quitted the earth.

We ſee in Cato the form of a prayer uſed by the country-people, wherein may be diſcerned the precious tokens of the antient tradition of men, who attributed every thing to God, and addreſſed themſelves to him in all their temporal neceſſities, becauſe they knew he preſided over all things, and that all things depended on him. I ſhall repeat a good part of it, and hope it will not be unaccep-

* In urbe luxuries creatur: ex luxuria exiſtat avaritia neceſſe eſt: ex avaritia erumpat audacia: inde omnia ſcelera gignuntur—In ruſticis moribus, in victu arido, in hac horrida incultaque vita iſtiuſmodi maleficia gigni non ſolunt——Cupiditates porro quæ poſſunt eſſe in eo, qui ruri ſemper habitârit, & in agro colendo vixerit? Quæ vita maximè disjuncta a cupiditate, & cum officio conjuncta——Vita autem ruſtica parſimoniæ, diligentiæ, juſtitiæ, magiſtra eſt. *Cic. pro Roſc. Amer.* n. 39. & 75.

table.

table. It is in a ceremony, called *Solitaurilia*, and, according to ſome, *Suovetaurilia*, in which the country-people made a proceſſion round their lands, and offered libations and ſacrifices to certain gods.

" Father Mars, ſaid the ſuppliant, I humbly " implore and conjure you to be propitious and " favourable to me, my family, and all my do- " meſtics, in regard to the occaſion of the preſent " proceſſion in the fields, lands, and eſtate: To " prevent, avert, and remove from us all diſeaſes " known and unknown, deſolations, ſtorms, cala- " mities, and peſtilential air: to make our plants, " corn, vines, and trees, grow and come to per- " fection: to preſerve our ſhepherds and flocks: " To grant thy preſervation of life and health to " me, my family, and all my domeſtics." What a reproach is it that Chriſtians, and often thoſe who have the greateſt ſhare in the goods of this world, ſhould in theſe days be ſo little careful to demand them from God, and be aſhamed to thank him for them! Amongſt the Pagans all their meals began and ended with prayers, which are now baniſhed from almoſt all our tables.

Columel. l. 1. c. 8. Columella enters into a detail upon the duties of the maſter or farmer, in regard to his domeſtics, which ſeems full of reaſon and humanity. " Care " ought to be taken, ſays he, that they are well " clad, but without finery: that they are defended " againſt the wind, cold, and rain. In directing " them, a * medium ſhould be obſerved between " too great indulgence and exceſſive rigour, in " order to make them rather fear, than experience, " ſeverities and chaſtiſements; and they ſhould be " prevented from doing amiſs by diligence, and " their maſter's preſence: for good conduct con- " ſiſts in preventing, inſtead of puniſhing, faults.

Ibid. l. 12. " When they are ſick, care ſhould be taken, that

* *The lands were cultivated by ſlaves.*

" they

" they are well tended, and that they want for " nothing; which is the certain means to make " their buſineſs grateful to them." He recommends alſo the ſame uſage of ſlaves, who often worked laden with chains, and who were generally treated with great rigour.

What he ſays, with regard to the miſtreſs of a country-family, is very remarkable: Providence, in uniting man and woman, intended they ſhould be á mutual ſupport to each other, and for that reaſon aſſigned to each of them their peculiar functions. The man, deſigned for buſineſs without doors, is obliged to expoſe himſelf to heat and cold; to undertake voyages by ſea, and journeys by land; to ſupport the labours of peace and war; that is, to apply himſelf to the works of the field, and in carrying arms: all exerciſes which require a body robuſt, and capable of bearing fatigues. The woman, on the contrary, too weak to ſuſtain theſe offices, is reſerved for affairs within doors. The care of the houſe is confided to her; and as the proper qualities for her employment are attention and exactneſs, and as fear renders us more exact and attentive, it was neceſſary that the woman ſhould be more timorous. On the contrary, becauſe the man acts and labours almoſt always without doors, and is often obliged to defend himſelf againſt injuries, God has infuſed into him boldneſs and courage. Hence * in all ages, both amongſt the Greeks and Romans, the government of the houſe devolved upon the women, that their huſbands, after having tranſacted their buſineſs abroad, might return to their houſes free from all cares, and find á perfect tranquillity at home.

Colum. in præf. l. 12.

* Nam & apud Græcos, & mox apud Romanos uſque in patrum noſtrorum memoriam, fere domeſticis labor matronalis fuit, tanquam ad requiem forenſium exercitationum omni cura depoſita patribus-familias intra domeſticos penates recipientibus.

This

This is what Horace deſcribes ſo elegantly in one of his odes *, which Dryden tranſlates thus:

But if a chaſte and pleaſing wife,
To eaſe the bus'neſs of his life,
Divides with him his houſhold care,
Such as the Sabine matrons were,
Such as the ſwift Apulian's bride.
Sun-burnt and ſwarthy though ſhe be,
Will fire for winter's nights provide,
And without noiſe will overſee
His children and his family;
And order all things till he come,
Sweaty, and over-labour'd, home;
If ſhe in pens his flock will fold,
And then produce her dairy ſtore,
And wine to drive away the cold,
And unbought dainties of the poor, &c.

The antients ſeem to have excelled themſelves in treating this on ſubject, ſo many fine thoughts and beautiful expreſſions it ſupplies. *Mr. Rollin gives here a proſe tranſlation of the paſſage at bottom, in the Georgics; which, it was conceived, would be no leſs agreeable in Mr. Dryden's Verſion:*

† *O happy, if he knew his happy ſtate,*
The ſwain, who, free from bus'neſs and debate,
Receives

* Quod ſi pudica mulier in partem juvet
Domum atque dulces liberos,
(Sabina qualis aut peruſta ſolibus
Pernicis uxor Appuli)
Sacrum vetuſtis extruat lignis focum
Laſſi ſub adventum viri;
Claudenſque textis cratibus lætum pecus,
Diſtenta ſiccet ubera,
Et horna dulci vina promens dolio,
Dapes inemptas apparet, &c. HOR. *Ep.* 2.

† O fortunatos nimium, ſua ſi bona nôrint,
Agricolas! quibus ipſa, procul diſcordibus armis,
Fundit

Receives his eaſy food from nature's hand,
And juſt returns of cultivated land.
No palace, &c.
But eaſy, quiet, a ſecure retreat,
A harmleſs life, that knows not how to cheat,
With home-bred plenty the rich owner bleſs,
And rural pleaſures crown his happineſs.
Unvex'd with quarrels, undiſturb'd with noiſe,
The country-king his peaceful realm enjoys:
Cool grots, and living lakes, the flow'ry pride
Of meads, and ſtreams, that thro' the valleys glide;
And ſhady groves, that eaſy ſleep invite,
And, after toilſome days, a ſoft repoſe at night.
Wild beaſts of nature in his woods abound,
And youth, of labour patient, plough the ground,
Inur'd, to hardſhip, and to homely fare.
Nor venerable age is wanting there
In great examples to the youthful train:
Nor are the Gods ador'd with rites prophane.
From hence Aſtræa took her flight, and here
The prints of her departing ſteps appear.
Georg. Lib. II. l. 439.

The fine deſcription Cicero gives us, in his eſſay upon old-age, of the manner in which corn and grapes gradually arrive at perfect maturity, ſhews his taſte for a country life, and inſtructs us, at the ſame time, in what manner we ought to conſider thoſe wonderful productions, that merit our admiration no leſs from their being common and

Fundit humo facilem victum juſtiſſima tellus.
Si non, &c.
At ſecura quies, & neſcia fallere vita,
Dives opum variarum; at latis otia fundis,
Speluncæ, vivique lacus; at frigida Tempe,
Mugituſque boum, molleſque ſub arbore ſomni
Non abſunt: illic ſaltus ac luſtra ferarum,
Et patiens operum, parvoque aſſueta juventus,
Sacra Deûm, ſanctique patres. Extrema per illos
Juſtitia excedens terris veſtigia fecit.
Virg. Georg. l. 2.

annual.

annual. And, indeed, if a ſimple deſcription gives ſo much pleaſure, what effect, in a mind rationally curious, ought the reality itſelf to have, and the actual view of what paſſes in vines and fields of corn, till the fruits of both are brought in and laid up in cellars and barns? And as much may be ſaid of all the other riches, with which the earth annually cloaths herſelf.

This is what makes reſidence in the country ſo agreeable and delightful, and ſo much the deſire of magiſtrates and perſons employed in ſerious and important affairs. Tired and fatigued with the continual cares of the city, they naturally cry out with Horace: * "O country, when ſhall I ſee you? "When will it be allowed me to forget, in thy "charming retreats, my cares and ſolicitude, either "in amuſing myſelf with the books of the antients, "or enjoying the pleaſure of having nothing to "do, or repoſing myſelf in ſweet ſlumber?" The pureſt pleaſures, are no doubt, to be found there. The country ſeems, according to the happy expreſſion of the ſame poet, to † reſtore us to ourſelves, in relieving us from a kind of ſlavery, and in placing us where we may juſtly be ſaid to live and reign. We enter, in a manner, into a converſation with the trees and plants; we queſtion them; we make them give us an account of the fruits they

* O rus, quando ego te aſpiciam, quandoque licebit
Nunc veterum libris, nunc ſomno, & inertibus horis,
Ducere ſollicitæ jucunda oblivia vitæ?

O rural ſcenes, and O ſerene abodes,
Wherein we ſeem to emulate the gods,
When, void of care, of paſſion, and of ſtrife,
And all the buſy ills of tedious life,
With you my happy hours ſhall I employ
In ſweet viciſſitudes of reſt and joy,
In books that raiſe the Soul, and learned eaſe,
In ſleep, in leiſure, and in what I pleaſe? Paraph.

† Vilice ſylvarum, & mihi me reddentis agelli.
HOR. *Ep.* 14. l. 1.
Vivo & regno, ſimul iſta reliqui, &c.
HOR. *Ep.* 10. l. 1.

produce,

produce, and receive ſuch excuſes as they have to make, when defective in bearing*: alledging ſometimes the great rains, ſometimes exceſſive heats, ſometimes the ſeverity of the cold. It is Horace who lends them this language.

All I have ſaid ſufficiently implies, that I ſpeak no longer of that painful and laborious tillage, to which man was at firſt condemned: but that I have another in view, intended for his pleaſure, and to employ him with delight; an employment perfectly conformable to his original inſtitution, and the deſign of his Creator, as it was commanded Adam immediately after his formation. In effect, it ſeems to ſuggeſt to us the idea of the terreſtrial paradiſe, and to partake, in ſome meaſure, of the happy ſimplicity and innocence which reigned there. We find that in all times, it has been the moſt grateful amuſement of princes, and the moſt powerful kings. Without mentioning the famous hanging gardens, with which Babylon was adorned, the Scripture informs us, that Ahaſuerus (Darius, ſon of Darius Hyſtaſpes) had planted part of the trees of his garden, and that he cultivated it with his own royal hands: *Juſſit convivium præparari in veſtibulo horti & nemoris, quod regio cultu & manu conſitum erat.* [*I do not find the latter part of this text in the Engliſh Bible.*] We have ſaid, that Cyrus the younger anſwered Lyſander, who admired the beauty, œconomy, and diſpoſition of his gardens, that himſelf had drawn the plan, laid them out, and planted many of the trees with his own hands: *Ego omnia iſta ſum dimenſus: mei ſunt ordines, mea deſcriptio: multæ etiam iſtarum arborum mea manu ſunt ſatæ.* Esther i. 5. Cic. de Senec. tut. n. 59.

* Funduſque mendax, arbore nunc aquas
Culpante, nunc torrentia agros
Sidera, nunc hiemes iniquas. Hor. *Od.* 1. I. 3.
When the land fails, and in its fruits,
Againſt the ſhow'ry skies imputes,
Or the whole blame with equal reaſon caſts
On ſummer's ſultry ſuns, or winter's fatal blaſts.

We

We ſhould never be willing to quit ſo delightful a reſidence, were it poſſible for us to poſſeſs it always; and have endeavoured, at leaſt for our conſolation, to impoſe a kind of illuſion upon ourſelves, by tranſporting the country in a manner into the midſt of cities; not a ſimple and almoſt wild country, but a trimmed, laid out, embelliſhed, I had almoſt ſaid, painted country. I mean thoſe adorned and elegant gardens, which preſent ſo grateful and ſplendid a view to our eyes. What beauty, riches, abundance, variety of ſweets, colours and objects! To ſee * the invariable conſtancy and regularity of flowers, in ſucceeding each other, (and as much may be ſaid of fruits) one would think that the earth, attentive to pleaſing its maſter, endeavours to perpetuate her preſents, by continually paying him the new tributes of every ſeaſon. What a throng of reflexions does not this ſuggeſt to a curious, and ſtill more to a religious, mind!

Pliny, after having confeſſed, that no eloquence was capable of expreſſing duly the incredible abundance and wonderful variety of the riches and beauties, which nature ſeems to ſpread with complacency and delight throughout gardens, adds a very juſt and inſtructive remark. † He obſerves upon the difference nature has made, as to the duration of trees and flowers. To the trees and plants deſigned for the nouriſhment of man with their fruits, and for the ſtructure of ſhips and edifices, ſhe has granted years, and even ages of time. To flowers and ſweets, which ſerve only for pleaſure, ſhe has given only ſome moments and days of life;

* Sed illa quanta benignitas naturæ, quod tam multa ad veſcendum, tam varia, tamque jucunda gignit; neque ea uno tempore anni, ut ſemper & novitate delectemur, & copia. *Cic. de nat. deor.* l. 2. n. 131.

† Quippe reliqua uſus alimentique gratia genuit: ideoque ſecula annoſque tribuit iis. Flores vero odoreſque in diem gignit: magna, ut palam eſt, admonitione hominum, quæ ſpectatiſſimè floreant celerrime marceſſere. *Plin.* l. 2. c. 1.

as

as if ſhe intended to admoniſh us, that what is moſt ſhining and ſplendid ſooneſt fades, and paſſes away with rapidity. Malherbe expreſſes this latter thought in a very lively manner, where he deplores the death of a very young and beautiful perſon:

Et roſe elle a vecu ce qui vivant les roſes,
L'eſpace d'un matin.
And liv'd a roſe, as roſes live,
A ſingle morning's ſpace.

It is the great advantage of agriculture to be more ſtrictly united with religion and alſo moral virtue, than any other art; which made Cicero ſay, as we have ſeen, that a country life came neareſt to that of the wiſe man; that is, it was a kind of practical philoſophy.

To conclude this ſmall treatiſe where I began it, it muſt be confeſſed, that, of all human employments, which have no immediate relation to God and juſtice, the moſt innocent is agriculture. It was, as has been ſaid, that of the firſt man in his ſtate of innocence and duty. It afterwards became part of the penance impoſed on him by God. So that, both in the ſtates of innocence and ſin, * it was commanded to him, and in his perſon to all his deſcendants. It is, however, become, in the judgment of pride, the meaneſt and moſt contemptible of employments: and, whilſt uſeleſs arts, which conduce only to luxury and voluptuouſneſs, are protected and honoured, all thoſe who labour for the welfare and happineſs of others are abandoned to poverty and miſery.

* *Hate not laborious work, nor the husbandry, which the moſt High hath created.* Eccleſiaſt. vii. 15.

CHAPTER II.

OF COMMERCE.

ARTICLE I.

Excellency and advantages of commerce.

IT may be ſaid, without fear of being ſuſpected of exaggeration, that commerce is the moſt ſolid foundation of civil ſociety, and the moſt neceſſary principle to unite all men, of whatever country or condition they are, with each other. By its means the whole world is but one city, and one family. It is the ſource of univerſal plenty to every part of it. The riches of one nation become thoſe of all people, and no country is barren, or at leaſt ſenſible of its ſterility. All its neceſſities are provided for in time from the extremities of the univerſe; and every region is amazed to find itſelf abound in foreign productions, and enriched with a thouſand commodities, unknown to itſelf, and which however compoſe all that is moſt agreeable in life. It is by the commerce of the ſea and rivers, that is to ſay, by navigation, that God has united all mankind amongſt themſelves in ſo wonderful a manner, by teaching them * to direct and govern the two moſt violent things in nature, the ſea and the winds, and to ſubſtitute them to their uſes and occaſions. He has joined the moſt remote people by this means, and preſerved, amongſt the different nations, an image of the dependance he has or-

* Quas res violentiſſimas natura genuit, earum moderationem nos ſoli habemus, maris atque ventorum, propter nauticarum rerum ſcientiam. *Cic. de Nat. deor.* l. 2. p. 15.

dained

dained in the ſeveral parts of the ſame body by the veins and arteries.

This is but a weak, a ſlight idea, of the advantages ariſing from commerce to ſociety in general. With the leaſt attention to particulars, what wonders might we not diſcover? But this is not the proper place for ſuch inquiries. I ſhall confine myſelf to one reflection, which ſeems very proper for our underſtanding at once the weakneſs and grandeur of man.

I ſhall conſider him at firſt in the higheſt degree of elevation to which he is capable of attaining, I mean upon the throne: lodged in ſuperb palaces; ſurrounded with all the ſplendor of the royal dignity; honoured and almoſt adored by throngs of courtiers, who tremble in his preſence; placed in the centre of riches and pleaſures, which vie with each other for his favour; and ſupported by numerous armies, who wait only to obey his orders. Behold the weight of human greatneſs! But what becomes of this ſo powerful, ſo awful, prince, if commerce happens to ceaſe on a ſudden; if he is reduced to himſelf, to his own induſtry and perſonal endeavours? Abandoned to himſelf in this manner; diveſted of that pompous outſide, which is not him, and is abſolutely foreign to his perſon; deprived of the ſupport of others, he falls back into his native miſery and indigence; and, to ſum up all in a word, he is no longer any thing.

Let us now conſider man in a mean condition, inhabiting a little houſe; reduced to ſubſiſt on a little bread, meat, and drink; covered with the plaineſt cloaths; and enjoying, in his family, not without difficulty, the other conveniencies of life. What ſeeming ſolitude, what a forlorn ſtate, what oblivion ſeems he in, with regard to all other mortals! We are much deceived, when we think in this manner. The whole univerſe is attentive to

him. A thouſand hands work for his occaſions, and to cloath and nouriſh him. For him manufactures are eſtabliſhed, granaries and cellars filled with corn and wine, and different metals extracted from the bowels of the earth with ſo much danger and difficulty.

There is nothing, even to the things that miniſter to pleaſure and voluptuouſneſs, which the moſt remote nations are not ſollicitous to transfer to him through the moſt ſtormy ſeas. Such are the ſupplies, which commerce, or to ſpeak more properly, Divine Providence, always employed for our occaſions, continually procures for us all, for each of us in particular: ſupplies, which to judge aright of them, are, in a manner, miraculous, which ought to fill us with perpetual admiration, and make us cry out with the prophet, in the tranſports of a lively gratitude: *O Lord, what is man, that thou art mindful of him, or the ſon of man that thou viſiteſt him?*

Pſal. viii. 4.

It would be to no purpoſe for us to ſay, that we have no obligation for thoſe who labour for us in this manner, becauſe their particular intereſt puts them in motion. This is true; but is their work therefore of leſs advantage to us? God, to whom alone it belongs to produce good from evil itſelf, makes uſe of the covetouſneſs of ſome for the benefit of others. It is with this view providence has eſtabliſhed ſo wonderful a diverſity of conditions amongſt us, and has diſtributed the goods of life with ſo prodigious an inequality. If all men were eaſy in their fortunes, were rich and opulent, who amongſt us would give himſelf the trouble to till the earth, to dig in the mine, or to croſs the ſeas? Poverty or covetouſneſs charge themſelves with theſe laborious, but uſeful toils. From whence it is plain, that all mankind, rich or poor, powerful or impotent, kings or ſubjects, have a mutual dependance upon each other for the demands

mands of life; the poor not being able to live without the rich, nor the rich without the labour of the poor. And it is commerce, ſubſiſting from theſe different intereſts, which ſupplies mankind with all their neceſſities, and, at the ſame time, with all their conveniencies.

ARTICLE II.

Antiquity of commerce. Countries and cities moſt famed for it.

IT is very probable, that commerce is no leſs antient than agriculture. It begun, as was natural, between private perſons, mankind aſſiſting each other with whatſoever they had of uſeful and neceſſary to human life. Cain, no doubt, ſupplied Abel with corn, and the fruits of the earth for his food: and Abel, in exchange, ſupplied Cain with ſkins and fleeces for his cloathing, and with milk, curds, and perhaps meat for his table. Tubalcain, ſolely employed in works of copper and iron, for the various uſes and occaſions of life, and for arms to defend men, either againſt human enemies or wild beaſts, was certainly obliged to exchange his braſs and iron works for other merchandiſe, neceſſary to feeding, cloathing, and lodging him. Commerce afterwards, extending gradually from neighbour to neighbour, eſtabliſhed itſelf between cities and adjacent countries, and, after the deluge, enlarged its bounds to the extremities of the world.

The holy Scripture gives us a very antient example of traffic by the caravans of the Iſhmaelites and Midianites, to whom Joſeph was ſold by his brethren. They were upon their return from Gilead, with their camels laden with ſpices, aromatic goods, and with other precious merchandiſe of that country. Theſe they were carrying into Egypt, where there was a great demand for them, occaſioned Gen. xxvii. 25.

ſioned by their cuſtom of embalming the bodies of men, after their death, with great care and expence.

Homer * informs us, that it was the cuſtom of the heroic age of the ſiege of Troy, for the different nations to exchange the things that were moſt neceſſary for life with each other; a proof, ſays Pliny, that it was rather neceſſity than avarice, that gave birth to this primitive commerce. We read, in the ſeventh book of the Iliad, that upon the arrival of certain veſſels, the troops went in crowds to purchaſe wine, ſome with copper, and others with iron, ſkins, oxen, and ſlaves.

We find no navigators in hiſtory ſo antient as the Egyptians and Phœnicians. Theſe two neighbouring nations ſeem to have divided the commerce by ſea between them: the Egyptians had poſſeſſed themſelves chiefly of the trade of the Eaſt, by the Red ſea; and the Phœnicians of that of the Weſt, by the Mediterranean.

What fabulous authors ſay of Oſiris, who is the Bacchus of the Greeks, that he undertook the conqueſt of the Indies, as Seſoſtris did afterwards, makes it probable, that the Egyptians carried on a great trade with the Indians.

As the commerce of the Phœnicians was much more to the weſt than that of the Egyptians, it is no wonder that they are more celebrated upon that account by the Greek and Roman authors. Herodotus ſays, that they were the carriers of the merchandiſe of Egypt and Aſſyria, and tranſacted all their trade for them, as if the Egyptians had not employed themſelves in it; and that they have been believed the inventors of traffic and navigation, though the Egyptians have a more legitimate claim to that

Herod. l. 1. c. 1.

* Quantum feliciore ævo, cum res ipſæ permutabantur inter ſeſe, ſicut & Trojanis temporibus factitatum Homero credi convenit! Ita enim, ut opinor, commercia victûs gratiâ inventa. Alios coriis boum, alios ferro captiviſque rebus emptitaſſe tradit. *Plin.* l. 33. c. 1.

glory.

glory. Certain it is, the Phœnicians diſtinguiſhed themſelves moſt by antient commerce, and are alſo a proof to what an height of glory, power, and wealth, a nation is capable of raiſing itſelf only by trade.

This people poſſeſſed a narrow track of land upon the ſea-coaſt, and Tyre itſelf was built in a very poor ſoil; and, had it been richer and more fertile, it would not have been ſufficient for the ſupport of the great number of inhabitants, which the early ſucceſs of its commerce drew thither.

Two advantages made them amends for this defect. They had excellent ports upon the coaſts of their ſmall ſtate, particularly that of their capitol; and they had naturally ſo happy a genius for trade, that they were looked upon as the inventors of commerce by ſea, eſpecially of that carried on by long voyages.

The Phœnicians knew ſo well how to improve both theſe advantages, that they ſoon made themſelves maſters of the ſea, and of trade. Libanus, and other neighbouring mountains, ſupplying them with excellent timber for building of veſſels, in a little time they fitted out numerous fleets of merchant-ſhips, which hazarded voyages into unknown regions, in order to eſtabliſh a trade with them. They did not confine themſelves to the coaſts and ports of the Mediterranean, they entered the ocean by the ſtreights of Cadiz or Gibraltar, and extended their correſpondence to the right and left. As their people multiplied almoſt infinitely, by the great number of ſtrangers, whom the deſire of gain, and the certain opportunity of inriching themſelves, drew to their city, they ſaw themſelves in a condition to plant many remote colonies, and particularly the famous one of Carthage, which, retaining the Phœnician ſpirit, with regard to traffic, did not give place to Tyre itſelf in trading, and

ſurpaſſed it exceedingly by the extent of dominion, and the glory of military expeditions.

The degree of glory and power, to which commerce and navigation had elevated the city of Tyre, rendered it ſo famous, that we could ſcarce believe there is no exaggeration in what profane authors report of it, if the prophets themſelves had not ſpoken of it with ſtill greater magnificence. Tyre, ſays Ezekiel, to give us ſome idea of its power, is a ſuperb veſſel. *They have made all thy ſhip-boards of fir-trees of Senir; they have taken cedars from Lebanon to make maſts for thee. Of the oaks of Baſhan have they made thine oars: the company of the Aſhurites have made thy benches of ivory, brought out of the iſles of Chittim. Fine linnen, with broidered work from Egypt, was that which thou ſpreadeſt forth to be thy ſail: blue and purple from the iſles of Eliſha was that which covered thee. The inhabitants of Zidon and Arvad were thy mariners: thy wiſe men, O Tyrus, that were in thee, were thy pilots.* The prophet, by this figurative language, deſigns to ſhew us the power of this city. But he gives, with more energy, a circumſtantial account of the different people with whom it traded. The merchandiſes of the whole earth ſeemed to be laid up in this city, and the reſt of the world appeared leſs its allies than tributaries.

Ezekiel, ch. xxvii. v. 5—10.

Id. v. 20 —24.

The Carthaginians trafficked with Tyre for all ſorts of riches, and filled its markets with ſilver, iron, pewter, and lead. Greece, * Tubal and Meſhech, brought it ſlaves, and veſſels of copper. † Togarmah ſupplied it with horſes and mules. ‡ Dedan with elephants teeth and ebony. The Syrians expoſed to ſale in it pearls, purple, wrought cloaths,

* Tubal and Meſhech. *The holy Scripture always joins theſe two people. The latter intends Muſcovy; the former, without doubt, was its neighbour.*

† Togarmah, *Cappadocia, from whence came the fineſt horſes, of which the emperors reſerved the beſt for their own ſtables.*

‡ Dedan. *The people of Arabia.*

lawn,

lawn, ſilk, and all ſorts of precious merchandiſe. The people of Judah and Iſrael brought thither the fineſt wheat, balm, honey, oyl, and fruits. Damaſcus ſent it excellent wine, and wool of the moſt lively and moſt exquiſite dyes: other people furniſhed it with iron work, myrrh, the aromatic calamus, and carpets of exquiſite workmanſhip to ſit upon. * Arabia, and all the princes of Cedar, brought thither their flocks of lambs, ſheep, and goats. † Shebah and Raamah, the moſt excellent fumes, precious ſtones, and gold; and others cedar-wood, bales of purple, embroidered cloathing, and every kind of rich goods.

I ſhall not undertake to diſtinguiſh exactly the ſituation of the different nations, of whom Ezekiel ſpeaks, this not being the proper place for ſuch a diſquiſition. It ſuffices to obſerve, that this long enumeration, into which the holy Spirit has thought fit to deſcend, with regard to the city of Tyre, is an evident proof, that its commerce had no other bounds than the world, as known at that time. Hence it was conſidered, as the common metropolis of all nations, and as the queen of the ſea. Iſaiah paints its grandeur and ſtate in moſt lively, but very natural, colours, where he ſays, that Tyre wore a diadem upon her brows; that the moſt illuſtrious princes of the univerſe were her correſpondents, and could not be without her traffic; that the rich merchants, incloſed within her walls, were in a condition to diſpute precedency with crowned heads, and pretended, at leaſt, to an equality with them: *Who hath taken this counſel againſt Tyre, the crowned city, whoſe merchants are princes, whoſe traffickers are the honourable of the earth?* Iſa. xxiii. 8.

* Arabia Deſerta, Cedar *was near it.*

† Shebah and Raamah. *People of Arabia Felix. All antiquity mentions the riches and ſpices of this people.*

I have

I have related elſewhere the deſtruction of the antient Tyre by Nebuchadonoſor, after a ſiege of thirteen years; and the eſtabliſhment of the new Tyre, which ſoon repoſſeſſed itſelf of the empire of the ſea, and continued its commerce with more ſucceſs, and more ſplendor, than before; till at length, being ſtormed by Alexander the Great, he deprived it of its maritime ſtrength and trade, which were transferred to Alexandria, as we ſhall ſoon ſee.

Whilſt both the old and new Tyre experienced ſuch great revolutions, Carthage, the moſt conſiderable of their colonies, was become very flouriſhing. Traffic had given it birth: traffic augmented it, and put it into a condition to diſpute the empire of the world for many years with Rome. Its ſituation was much more advantageous than that of Tyre. It was equally diſtant from all the extremities of the Mediterranean ſea; and the coaſt of Africa, upon which it was ſituated, a vaſt and fertile region, ſupplied it abundantly with the corn neceſſary to its ſubſiſtence. With ſuch advantages thoſe Africans, making the beſt uſe of the happy genius for trade and navigation which they had brought from Phœnicia, attained ſo great a knowledge of the ſea, that in that point, according to the teſtimony of Polybius, no nation was equal to them. By this means they roſe to ſuch an height of power, that in the beginning of their third war with the Romans, which occaſioned their final ruin, Carthage had ſeven hundred thouſand inhabitants, and three hundred cities in its dependance upon the continent of Africa only. They had been maſters not only of the tract of land extending from the great Syrtes to the pillars of Hercules, but alſo of that which extends itſelf from the ſame pillars to the ſouthward, where Hanno, the Carthaginian, had founded ſo many cities, and ſettled ſo many colonies. In Spain, which they had almoſt

moſt entirely conquered, Aſdrubal, who commanded there after Barca, Hannibal's father, had founded Carthagena, one of the moſt celebrated cities of thoſe times. Great part alſo of Sicily and Sardinia had formerly ſubmitted to their yoke.

Poſterity might have been indebted for great lights to the two illuſtrious monuments of the navigation of this people, in the hiſtory of the voyages of Hanno, ſtiled King of the Carthaginians, and of Imilco, if time had preſerved them. The firſt related the voyages he had made in the ocean beyond the pillars of Hercules, along the weſtern coaſt of Africa; and the other his on the weſtern coaſt of Europe; both by the order of the ſenate of Carthage. But time has conſumed thoſe writings.

This people ſpared neither pains nor expences to bring navigation to perfection. That was their only ſtudy. The other arts and ſciences were not cultivated at Carthage. They did not pique themſelves upon polite knowledge. They profeſſed neither poetry, eloquence, nor philoſophy. The young people, from their infancy, heard of nothing in converſation, but merchandiſe, accounts, ſhips, and voyages. Addreſs in commerce was a kind of inheritance in their families, and was the beſt part of their fortunes; and, as they added their own obſervations to the experience of their fathers, we ought not to be ſurpriſed, that their ability in this way always increaſed, and made ſuch a wonderful progreſs.

Hence it was that commerce raiſed Carthage to ſo high a degree of wealth and power, that it coſt the Romans two wars; the one of twenty-three, and the other of ſeventeen, years, both bloody and doubtful, to ſubdue that rival; and that at laſt victorious Rome did not believe it in her power to ſubject her enemy entirely, but by depriving her of the reſources ſhe might ſtill have found in trade;

trade; and which, during ſo long a ſeries of years, ſupported her againſt all the forces of the republic.

Carthage had never been more powerful by ſea, than when Alexander beſieged Tyre, the metropolis of her people. Her fortune began to decline from that time. Ambition was the ruin of the Carthaginians. Their being weary of the pacific condition of merchants, and preferring the glory of arms to that of traffic, coſt them dear. Their city, which commerce had peopled with ſo great a multitude of inhabitants, ſaw its numbers diminiſh to ſupply troops, and recruit armies. Their fleets, accuſtomed to tranſport merchants and merchandiſe, were no longer freighted with any thing, but munitions of war and ſoldiers; and, out of the wiſeſt and moſt ſucceſsful traders, they elected officers and generals of armies, who acquired them an exalted degree of glory indeed, but one of ſhort duration, and ſoon followed with their utter ruin.

The taking of Tyre by Alexander the Great, and the founding of Alexandria, which ſoon followed, occaſioned a great revolution in the affairs of commerce. That new ſettlement was, without diſpute, the greateſt, the moſt noble, the wiſeſt, and the moſt uſeful deſign that conqueror ever formed.

It was not poſſible to find a more happy ſituation, nor one more likely to become the mart for all the merchandiſe of the eaſt and weſt. That city had on one ſide a free commerce with Aſia, and the whole Eaſt by the Red ſea. The ſame ſea, and the river Nile, gave it a communication with the vaſt and rich countries of Ethiopia. The commerce of the reſt of Africa and Europe was open to it by the Mediterranean; and, for the inland trade of Egypt, it had, beſides the navigation of the Nile, and the canals cut out of it, the aſſiſtance of the caravans, ſo convenient for the ſe-

curity

curity of merchants, and the conveyance of their effects.

This induced Alexander to believe it a proper place for founding one of the fineſt cities and ports in the world. For the iſle of Pharos, which at that time was not joined to the continent, ſupplied him with the happieſt ſituation, after he had joined them by a mole, having two entrances, in which the veſſels of foreign nations arrived from all parts, and from whence the Egyptian ſhips were continually ſailing to carry their factors, and commerce, to all parts of the world then known.

Alexander lived too ſhort a time to ſee the happy and flouriſhing condition, to which commerce raiſed his city. The Ptolomies, to whoſe ſhare, after his death, Egypt fell, took care to improve the growing trade of Alexandria, and ſoon raiſed it to a degree of perfection and extent, that made Tyre and Carthage be forgotten, which, for a long ſeries of time, had tranſacted, and engroſſed to themſelves, the commerce of all nations.

Of all the kings of Egypt, Ptolomæus Philadelphus was the prince who contributed moſt to the bringing of commerce to perfection in his country. For that purpoſe he kept great fleets at ſea, of which Athenæus gives us the number, and deſcription, that cannot be read without aſtoniſhment. Beſides upwards of ſix-ſcore ſail of galleys of an extraordinary ſize, he gives him more than four thouſand other ſhips, which were employed in the ſervice of the ſtate, and the improvement of trade. He poſſeſſed a great empire, which he had formed, by extending the bounds of the kingdom of Egypt into Africa, Ethiopia, Syria, and beyond the ſea, having made himſelf maſter of Cilicia, Pamphylia, Lycia, Caria, and the Cyclades, poſſeſſing almoſt four thouſand cities in his dominions. To raiſe the happineſs of theſe provinces as high as poſſible, he endeavoured to draw into them, Athen. l. 5. p. 203.

them, by commerce, the riches and commodities of the East; and, to facilitate their passage, he built a city expressly on the western coast of the Red sea, cut a canal from Coptus to that sea, and caused houses to be erected along that canal, for the convenience of the merchants and travellers, as I have observed in its place.

Vol. VII. p. 306.

It was the convenience of this staple for merchandise, at Alexandria, which diffused immense riches over all Egypt; riches so considerable, that it is affirmed the customs only, for the importation and exportation of merchandise at the port of Alexandria, amounted yearly to more than thirty-seven millions of livres, though most of the Ptolomies were moderate enough in the imposts they laid on their people.

Cic. apud Strab. l. 17. p. 798.

Tyre, Carthage, and Alexandria were, without dispute, the most famous cities of antiquity for commerce: It was also followed with success at Corinth, Rhodes, Marseilles, and many other cities, but not with such extent and reputation.

ARTICLE III.

The end and materials of commerce.

THE passage of Ezekiel, which I have cited in regard to Tyre, includes almost all the materials, in which the antient commerce consisted: Gold, silver, iron, copper, tin, lead, pearls, diamonds, and all sorts of precious stones; purple, stuffs, cloths, ivory, ebony, cedar, myrrh, aromatic reeds, or the calamus; perfumes, slaves, horses, mules, grain, wine, cattle; and, in a word, all kind of precious merchandise. I shall not dwell here upon any thing, but what relates to mines of iron, copper, gold, silver, pearls, purple, and silk; nor treat even these heads with any great extent. Pliny the naturalist will be my ordinary guide,

guide, as to thoſe of my ſubjects he has wrote upon. And I ſhall make great uſe of the learned remarks of the author of the natural hiſtory of gold and ſilver, extracted from the thirty-third book of Pliny, and printed at London.

SECT. I.

Mines of iron.

IT is certain, that the uſe of metals, eſpecially of iron and copper, is almoſt as old as the world: but it does not appear, that gold or ſilver were much regarded in the firſt ages. Solely intent upon the neceſſities of life, the firſt inhabitants of the earth did what new colonies are obliged to do. They applied themſelves in building them houſes, clearing lands, and furniſhing themſelves with the inſtruments neceſſary for cutting wood, hewing ſtone, and other mechanical uſes. As all theſe tools could be formed only of iron, copper, or ſteel, thoſe eſſential materials became, by a neceſſary conſequence, the principal objects of their purſuit. Thoſe who were ſettled in countries which produced them, were not long without knowing their importance. People came from all parts in queſt of them; and their land, though in appearance poor and barren in every other reſpect, became an abundant and fertile ſoil to them. They wanted nothing, having that merchandiſe; and their iron bars were ingots, which procured them all the conveniencies and elegancies of life.

It would be very grateful to know where, when, how, and by whom theſe materials were firſt diſcovered. Concealed as they are from our eyes, and hid in the bowels of the earth in ſmall and almoſt imperceptible particles, which have no apparent relation, or viſible diſpoſition for the different works compoſed of them, who was it that inſtructed man in the uſes to be made of them? It would be doing

chance

chance too much honour to impute to it this discovery. The infinite importance, and almoſt indiſpenſable neceſſity for the inſtruments, with which they ſupply us, well deſerve, that we ſhould acknowledge it to proceed from the concurrence and goodneſs of Divine Providence. It is true, that providence commonly takes delight in concealing its moſt wonderful gifts under events, which have all the appearance of chance and accident. But attentive and religious eyes are not deceived in them, and eaſily diſcover, under theſe diſguiſes, the beneficence and liberality of God, ſo much the more worthy of admiration and acknowledgment, as leſs viſible to man. This is a truth confeſſed by the Pagans themſelves, as I have already obſerved elſewhere.

It is remarkable, that * iron, which, of all metals, is the moſt neceſſary, is alſo the moſt common, the eaſieſt to be found, leſs deep in the earth than any other, and moſt abundant.

As I find little in Pliny upon the manner in which the antients diſcovered and prepared metals, I am obliged to have recourſe to what the moderns ſay upon that head, in order to give the reader, at leaſt, ſome ſlight idea of the uſual methods in the diſcovery, preparation, and melting of thoſe metals; which were in part practiſed by the antients.

Plin. l. 34. c. 14, 15. The matter, from which iron is extracted, (which the term of art calls *iron-ore*) is found in mines of different depth, ſometimes in ſtones as big as the fiſt, and ſometimes only in ſand.

After having amaſſed the quantity of matter to be melted, it is put into large furnaces, where a great fire has been kindled. When the ore is melted and well ſkimmed, they make it run out of the furnace through a hole prepared for that pur-

* Ferri metalla ubique propemodum reperiuntur—Metallorum omnium vena ferri largiſſima eſt. *Plin.* l. 34. c. 14.

poſe,

poſe, from which running with rapidity like a torrent of fire, it falls into different moulds, according to the variety of works to be caſt, as kettles, and ſuch kind of utenſils.

In the ſame manner they form alſo the large lumps of iron, called *ſows*, of different ſizes, which weigh ſometimes two or three thouſand pounds, and upwards. Theſe are afterwards carried to the forge or foundery, to be forged or fined with the aſſiſtance of mills, which keep great hammers continually going.

Steel is a kind of iron refined and purified by fire, which renders it whiter, more ſolid, and of a ſmaller and finer grain. It is the hardeſt of all metals, when prepared and *tempered* as it ought. That *temper* is derived from cold water, and acquires a nice attention in the workman, in taking the ſteel out of the fire, when it has attained a certain degree of heat. Stridentia tingunt æra lacu.

When we conſider a ſharp and well poliſhed knife or razor, could we believe it was poſſible to form them out of a little earth, or ſome blackiſh ſtone? What difference is there between ſo rude a matter, and ſuch poliſhed and ſhining inſtruments! Of what is not human induſtry capable!

Mr. Reaumur * obſerves, in ſpeaking of iron, one thing well worthy of obſervation. Though fire ſeldom or ever renders it ſo liquid as it does gold, braſs, pewter, and lead; of metals, however, there is not one that takes the mould ſo perfectly, inſinuates itſelf ſo well into the moſt minute parts of it, and receives impreſſions with ſuch exactneſs.

* *Memoires de l'Acad. de Scienc. an.* 1726.

SECT. II.

Mines of copper or braſs.

COPPER, which is otherwiſe called braſs, is an hard, dry, weighty metal. It is taken out of mines like other metals, where it is found, as well as iron, either in powder or ſtone.

Before it is melted, it muſt be waſhed very much, in order to ſeparate the earth from it, with which it is mixed. It is afterwards melted in the furnaces by great fires, and when melted, poured off into moulds. The copper which has had only one melting, is the common and ordinary copper.

To * render it purer and finer, it is melted once or twice more. When it has paſſed the fire ſeveral times, and the groſſeſt parts are ſeparated from it, it is called *Roſette*, or the pureſt and fineſt copper.

Copper is naturally red, of which braſs is a ſpecies made yellow with *Lapis calaminaris.*

The *Lapis calaminaris*, which is alſo called *Cadmia* †, is a mineral or foſſile, which founders uſe to change the colour of copper yellow. This ſtone does not become yellow, till after it has been baked in the manner of bricks; it is then uſed either to make yellow, or increaſe, the red fine copper.

The yellow copper, or braſs, is therefore a mixture of the red, with *lapis calaminaris*, which augments its weight from ten to fifty in the hundred, according to the different goodneſs of the copper. It is called alſo *Latten*, and in the Roman language *Aurichalcum.*

Bronze is a made metal, conſiſting of a mixture of ſeveral metals.

* Præterea ſemel recoquunt: quod ſæpius feciſſe, bonitati plurimùm confert. *Plin.* l. 34. c. 8.

† Vena (æris) quo dictum eſt modo effoditur ignique perficitur. Fit & è lapide æroſo, quem vocant *Cadmiam*. *Plin.* l. 34. c. 1.

For

For the fine ſtatues of this metal, the mixture is half fine copper and half braſs. In the ordinary ſort, the mixture is of pewter, and ſometimes of lead, to ſave coſt.

There is alſo another ſpecies of mixt copper, called by the French *Fonte*, which differs from the *Bronze*, only by being more or leſs mixed.

The art of founding, or, as it is vulgarly called, of caſting in braſs, is very antient. All ages have made their veſſels, and other curious works, in metal. Caſting muſt have been very common in Egypt, when the Iſraelites left it, as they could form in the deſart, without any great preparations, a ſtatue with lineaments and ſhape, repreſenting a calf. Soon after they made the molten ſea, and all other veſſels for the tabernacle, and afterwards for the temple. It was not uncommon to form ſtatues of plates hammered into form, and rivetted together.

The invention of theſe images, either caſt or hammered, took birth in the Eaſt, as well as idolatry, and afterwards communicated itſelf to Greece, which carried the art to the higheſt degree of perfection.

The moſt celebrated and valuable copper amongſt the Greeks was that of Corinth, of which I have ſpoken elſewhere, and that of Delos. Cicero* joins them together in one of his orations, where he mentions a veſſel of braſs, called *authepſa*, in which meat was dreſſed with very little fire, and almoſt of itſelf: this veſſel was ſold ſo dear, that thoſe who paſſed by, and heard the ſum bid for it at the ſale, imagined the purchaſe of an eſtate was in queſtion.

* Domus referta vaſis Corinthiis & Deliacis: in quibus eſt authepſa illa, quam tanto pretio nuper mercatus eſt, ut qui pretereuntes pretium enumerari audiebant, fundum vænire arbitrarentur. *Orat. pro Roſc. Amer.* n. 133.

It is said, that brass was used before iron for the making of arms. It certainly was so before gold and silver for money, at least with the Romans. It consisted at first in lumps of brass, of different bigness, and was taken by weight, without having any fixed mark or figure upon it; from whence came the form of speaking used in sales, *per æs & libram.* * Servius Tullius, the sixth king of the Romans, was the first that reduced it to form, and stamped it with a particular impression. And as at that time the greatest riches consisted in cattle, oxen, sheep, hogs, &c. the figure of those animals, or of their heads, was stamped upon the first money that was coined, and it was called *pecunia*, from the word *pecus*, which signifies cattle in general. It was not till the consulship of Q. Fabius and Ogulnius, five years before the first Punic war, in the 485th year of Rome, that silver species was used at Rome. They, however, always retained the antient language, and denomination, taken from the word *æs*, brass. From thence the expression, *æs grave*, (heavy brass) to signify, at least in the origin of that term, the *asses* of a pound weight; *ærarium*, the public treasury, wherein, in antient times, there was only brass-money; *æs alienum*, borrowed money; with many others of like signification.

Plin. l. 34. c. 1.

* Servius Rex, primus signavit æs. Antea rudi usos Romæ Timæus tradit. Signatum est nota pecudum: unde pecunia appellata. *Plin.* l. 33. c. 3.

SECT.

SECT III.

Mines of gold.

TO find gold, says Pliny, we have three different methods. It is extracted either from rivers, the bowels of the earth, or the ruins of mountains, by undermining and throwing them down. Plin. l. 33. c. 4.

1. *Gold found in rivers.*

Gold is gathered in small grains, or little quantities, upon the shores of rivers, as in Spain upon the brink of the Tagus, in Italy upon the Po, in Thrace upon the Hebrus, in Asia upon the Pactolus, and, lastly, upon the Ganges in India; and * it is agreed, that the gold found in this manner is the best of all; because, having long run through rocks, and over sands, it has had time to cleanse and purify itself.

The rivers I mention were not the only ones in which gold was to be found. Our Gaul had the same advantage. Diodorus says, that nature had given it gold in a peculiar manner without obliging the natives to hunt after it with art and labour; that it was mingled with the sands of the rivers; that the Gauls knew how to wash those sands, extract the gold, and melt it down; and that they made themselves rings, bracelets, girdles, and other ornaments of it. Some rivers of France are † said to have retained this privilege: the Rhine, the Rhone, the Garonne, the Doux in Franche-Comté, the Cëze, and the Gardon, which have their sources in the Cevennes, the Ariége in the county of Foix, Diod. l. 5.

* Nec ullum absolutum aurum est, ut cursu ipso trituque perpolitum. *Plin.*

† *Memoirs of the Acad. of Sciences, an.* 1718.

and some others. The gathering of it indeed does not turn to any considerable account, scarce sufficing to the maintenance of the country-people, who employ themselves for some months in that work. They have sometimes their lucky days, when they get more than a pistole for their trouble; but they pay for them on others, which produce little or nothing.

2. *Gold found in the bowels of the earth.*

Those who search after gold, begin by finding what we call, in French, *la manne*, manna, a kind of earth, which by its colour, and the exhalations that rise from it, informs those, who understand mines, that there is gold underneath it.

As soon as the vein of gold appears, the water must be turned off, and the ore dug out industriously, which must be taken away, and washed in proper lavers. The ore being put into them, a stream of water is poured on continually, in proportion to the quantity of the ore to be washed; and, to assist the force of the water, an iron fork is used, with which the ore is stirred, and broken, till nothing remains in the laver, but a sediment of black sand, with which the gold is mingled. This sediment is put into a large wooden dish, in the midst of which four or five deep lines are cut, and by washing it, stirring it well in several waters, *conjectura*, the terrene parts dissolve, and nothing remains but pure gold dust. This is the method now used in Chili, and the same as was practised in the time of Pliny:

See Dict. of Commerce. Plin. l. 33. c. 4. *Aurum qui quærunt, ante omnia segullum tollunt: ita vocatur indicium. Alveus hic est, arenæ lavantur, atque ex eo quod resedit, conjectura capitur.* Every thing is comprehended in these few words. *Segullum:* which is what the *French* call *la manne*, or manna. *Alveus hic est:* that is, the vein of gold ore. *Arenæ lavantur:* this implies the lavers. *Atque ex eo quod resedit:* this

this is the ſediment of black ſand, in which the gold is contained. *Conjectura capitur:* here the ſtirring of the ſediment, the running off of the water, and the gold-duſt that remains are intimated.

It ſometimes happens, that, without digging far, the gold is found upon the ſuperficies of the earth: but this good fortune is not frequent, though there have been examples of it. For not long ago, ſays Pliny, gold was found in this manner in Nero's reign, and in ſo great a quantity, that fifty pounds a day, at leaſt, have been gathered of it. This was in Dalmatia. Plin. l. 33. c. 4.

It is commonly neceſſary to dig a great way, and to form ſubterraneous caverns, in which marble and ſmall flints are found, covered with the gold. Theſe caverns are carried on to the right or left according to the running of the vein: and the earth above it is ſupported with ſtrong props at proper diſtances. When the metallic ſtone, commonly called the ore in which the gold forms itſelf, is brought out of the mine, it is broken, pounded, waſhed, and put into the furnace. The firſt melting is called only ſilver, for there is always ſome mingled with the gold.

The ſcum which riſes in the furnace, is called *Scoria* in Latin. This is the droſs of the metal, which the fire throws up, and is not peculiar to gold, but common to all metallic bodies. This droſs is not thrown away, but pounded and calcined over again, to extract what remains of good in it. The crucible, in which this preparation is made, ought to be of a certain white earth, not unlike that uſed by the potters. There is ſcarce any other, which can bear the fire, bellows, and exceſſive heat of this ſubſtance melted. *It is called Taſconium.*

This metal is very precious, but coſts infinite pains in getting it. Slaves and criminals condemned to death, were employed in working the mines. The thirſt of gold has always extinguiſhed all ſenſe Diod. l. 3.

of humanity in the human heart. Diodorus Siculus obſerves, that theſe unhappy creatures, laden with chains, were allowed no reſt either by night or day: that they were treated with exceſſive cruelty; and, to deprive them of all hopes of being able to eſcape by corrupting their guards, ſoldiers were choſen for that office, who ſpoke a language unknown to them, and with whom, in conſequence, they could have no correſpondence nor form any conſpiracy.

3. *Gold found in the mountains.*

Plin. l. 33. c. 4. There is another method to find gold, which regards properly only high and mountainous places, ſuch as are frequently met with in Spain. * Theſe are dry and barren mountains in every other reſpect, which are obliged to give up their gold, to make amends, in ſome meaſure, for their ſterility in every thing elſe.

The work begins at firſt by cutting great holes on the right and left. The mountain itſelf is afterwards attacked by the aſſiſtance of torches and lamps. For the day is ſoon loſt, and the night continues as long as the work, that is, for ſeveral months. Before any great progreſs is made, great flaws appear in the earth, which falls in, and often cruſhes the poor miners to death; ſo that, ſays † Pliny, people are much more bold and venturous in ſearching after pearls at the bottom of the waves in the Eaſt, than in digging for gold in the bowels of the earth, which is become, by our avarice, more dangerous than the ſea itſelf.

It is therefore neceſſary in theſe mines, as well as in the firſt I ſpoke of, to form good arches at proper diſtances, to ſupport the hollowed mountain.

* Cæteri montes Hiſpaniarum aridi ſterileſque, in quibus nihil aliud gignatur, huic bono fertiles eſſe coguntur. *Plin.*

† Ut jam minùs temerarium videatur è profundo maris petere margaritas: tanto nocentiores fecimus terras. *Plin.*

There

There are great rocks and veins of ſtone found alſo in theſe, which muſt be broken by fire and vinegar. But, as the ſmoke and ſteam would ſoon ſuffocate the workmen, it is often more neceſſary, and eſpecially when the work is a little advanced, to break thoſe enormous maſſes with pick-axes and crows, and to cut away large pieces by degrees, which muſt be given from hand to hand, or from ſhoulder to ſhoulder, till thrown out of the mine. Day and night are paſſed in this manner. Only the hindmoſt workmen ſee day-light; all the reſt work by lamps. If the rock is found to be too long, or too thick, they proceed on the ſide, and carry on the work in a curve line.

When the work is finiſhed, and the ſubterraneous paſſages are carried their proper length, they cut away the props of the arches, that had been formed at due diſtances from each other. This is the uſual ſignal of the ruin which is to follow, and which thoſe, who are placed to watch it, perceive firſt, by the ſinking in of the mountain, which begins to ſhake: upon which they immediately, either by hallowing, or beating upon a brazen inſtrument, give notice to the workmen to take care of themſelves, and run away the firſt for their own ſafety. The mountain, ſapped on all ſides in this manner, falls upon itſelf, and breaks to pieces with a dreadful noiſe. The * victorious workmen then enjoy the ſight of nature overturned. The gold, however, is not yet found; and, when they began to pierce the hill, they did not know whether there was any in it. Hope and avarice were ſufficient motives for undertaking the labour, and confronting ſuch dangers.

But this is only the prelude to new toils, ſtill greater and more heavy than the firſt. For the

* Spectant victores ruinam naturæ: nec tamen adhuc aurum eſt. *Plin.*

waters

waters of the higher neighbouring mountains muſt be carried through very * long trenches, in order to its being poured with impetuoſity upon the ruins they have formed, and to carry off the precious metal. For this purpoſe new canals muſt be made, ſometimes higher or lower, according to the ground; and hence the greateſt part of the labour ariſes. For the level muſt be well placed, and the heights well taken in all the places, over which the torrent is to paſs to the lower mountain, that has been thrown down; in order that the water may have ſufficient force to tear away the gold wherever it paſſes, which obliges them to make it fall from the greateſt height they can. And, as to the inequality of the ground in its courſe, they remedy that by artificial canals, which preſerve the deſcent, and keep the water within their bounds. And if there are any large rocks, which oppoſe its paſſage, they muſt be hewn down, made level, and have tracks cut in them for the wood-work, which is to receive and continue the canal. Having united the waters of the higheſt neighbouring mountains, from whence they are to fall, they make great reſervoirs, of the breadth of two hundred, and the depth of ten, feet. They generally leave five openings, of three or four feet ſquare, to receive the water at ſeveral places.

After which, when the reſervoirs are full, they open the ſluice, from whence falls ſo violent and impetuous a torrent, that it carries all away before it, and even ſtones of conſiderable magnitude.

There is another work in the plain, at the foot of the mine. New trenches muſt be dug there, which form ſeveral beds, for the falling of the torrent from height to height, till it diſcharges itſelf into the ſea. But, to prevent the gold from being carried off with the current, they lay, at proper diſtances, good dams

* A centeſimo plerumque lapide.

of

of *Ulex*, a sort of shrub, much resembling our rosemary, but something thicker of leaves, and consequently fitter for catching this prey as in nets. Add to this, that good planks are necessary on each side of these trenches, to keep the water within them; and where there are any dangerous inequalities of ground, these new canals must be supported with * shores, till the torrent loses itself at last in the sand of the ocean, in the neighbourhood of which the mines commonly are.

The gold, got in this manner at the feet of mountains, has no need of being purified by fire; for it is at first what it ought to be. It is found in lumps of different bigness, as it is also in deep mines, but not so commonly.

As to the wild rosemary branches used on this occasion, they are taken up with care, dried, and then burnt; after this the ashes are washed on the turf, upon which the gold falls, and is easily gathered.

Pliny examines wherefore gold is preferred to other metals, and gives several reasons for it. Plin. l. 33. c. 3.

It is the only metal, which loses nothing, or almost nothing by the fire, not even of funeral piles, or conflagrations, in which the flames are generally most violent. It is even affirmed to be rather the better for having past the fire several times. It is by fire also that proof is made of it; for, when it is good, it takes its colour from it. This the workmen call *obryzum*, refined gold. What is wonderful in this proof, is, that the hottest charcoal has no effect on it: to melt it,† a clear fire of straw is necessary, with a little lead thrown in to refine it.

* *Machines to support those canals made of board.*

† *Strabo makes the same remark, and gives the reason for this effect:* Paleâ facilius liquefit aurum: quia flamma mollis cum fit proportionem habet temperatam ad id quod cedit & facilè funditur; carbo autem multum absumit, nimis colliquans sua vehementia & elevans. *Strab.* l. 3. p. 146.

Gold

Gold loſes very little by uſe, and much leſs than any other metal: whereas ſilver, copper, and pewter, ſoil the hands, and draw black lines upon any thing, which is a proof that they waſte, and loſe their ſubſtance more eaſily.

It is the only metal that contracts no ruſt, nor any thing which changes its beauty, or diminiſhes its weight. It is a thing well worthy of admiration, that of all ſubſtances gold preſerves itſelf beſt, and entire, without ruſt or dirt, in water, the earth, dung, and ſepulchres, and that throughout all ages. There are medals in being, which have been ſtruck above two thouſand years, which ſeem juſt come from the workman's hands.

It is obſerved, that * gold reſiſts the impreſſions and corroſion of ſalt and vinegar, which melt and ſubdue all other matter.

There is † no metal which extends better, nor divides into ſo great a number of particles of different kinds. An ounce of gold, for inſtance, will form ſeven hundred and fifty leaves, each leaf of four inches ſquare and upwards. What Pliny ſays here, is certainly very wonderful; but we ſhall preſently ſee, that our modern artificers have carried their ſkill much farther than the antients in this, as well as many other points.

In fine, gold will admit to be ſpun and wove, like wool, into any form. It may be worked even without wool (or ſilk) or with both. The firſt of the Tarquins triumphed in a veſt of cloth made of gold; and Agrippina, the mother of Nero, when the emperor Claudius her huſband gave the people the repreſentation of a ſea-fight, appeared at it in

* Jam contra ſalis & aceti ſuccos, domitores rerum, conſtantia. *Plin.*

† Nec aliud laxius dilatatur, aut numeroſius dividitur, utpote cujus unciæ in ſeptingenas, pluresque bracteas, quaternum utroque digitorum, ſpargantur. *Plin.*

a long

a long robe made of gold wires, without any mixture whatſoever.

What is related of the extreme ſmallneſs of gold and ſilver, when reduced into wire, would ſeem incredible, if not confirmed by daily experience. I ſhall only copy here what I find in the memoirs of the academy of ſciences upon this head. An. 1718.

We know, ſay thoſe memoirs, that gold-wire is only ſilver-wire gilt. By the means of the engine for drawing wire, a cylinder of ſilver, covered with leaf gold, being extended, becomes wire, and continues gilt to the utmoſt length it can be drawn. It is generally of the weight of forty-five *marks*; its diameter is an inch and a quarter French, and its length almoſt two and twenty inches. Mr. Reaumur proves, that this cylinder of ſilver, of two and twenty inches, is extended by the engine to thirteen million, nine hundred and ſixty-three thouſand, two hundred and forty inches, or, one million, one hundred and ſixty-three thouſand, five hundred and twenty feet; that is to ſay, ſix hundred and thirty-four thouſand, ſix hundred and ninety-two times, longer than it was, which is very near ninety-ſeven leagues in length, allowing two thouſand perches to each league. This wire is ſpun over ſilk-thread, and before ſpun is made flat from round as it was, when firſt drawn, and in flatting generally lengthens one ſeventh at leaſt; ſo that its firſt length of tweny two inches is changed into that of an hundred and eleven leagues. But this wire may be lengthened a fourth in flatting, inſtead of a ſeventh, and in conſequence be ſixſcore leagues in extent. This ſhould ſeem a prodigious extenſion, and yet is nothing.

The cylinder of ſilver of forty-five marks, and twenty two inches length, requires only to be covered with one ounce of leaf gold. It is true, the gilding will be light, but it will always be gilding; and, though the cylinder in paſſing the engine attains the

the length of a hundred and twenty leagues, the gold will ſtill continue to cover the ſilver without variation. We may ſee how exceedingly ſmall the ounce of gold, which covers the cylinder of ſilver of forty-five marks, muſt become, in continuing to cover it throughout ſo vaſt an extent. Mr. Reaumur adds to this conſideration, that it is eaſy to diſtinguiſh, that the ſilver is more gilt in ſome than in other places; and he finds, by a calculation of wire the moſt equally gilt, that the thickneſs of the gold is $\frac{1}{1050000}$th of a line, or twelfth part of an inch; ſo enormous a ſmallneſs, that it is as inconceivable to us, as the infinite points of the geometricians. It is, however, real, and produced by mechanical inſtruments, which, though ever ſo fine to our ſenſes, muſt ſtill be very groſs in fact. Our underſtanding is loſt and confounded in the conſideration of ſuch objects; and how much more in the *infinitely Small of* God!

ELECTRUM.

Lib. 33. c. 3. It is neceſſary to obſerve, ſays Pliny, whom I copy in all that follows, that in all kinds of gold there is always ſome ſilver, more or leſs: ſometimes a tenth, ſometimes a ninth or an eighth. There is but one mine in Gaul from whence gold is extracted, that contains only a thirtieth part of ſilver, which makes it far more valuable than all others. This gold is called *Albicratenſe*, of *Albicrate*, (an ancient place in Gaul near Tarbæ.) There were ſeveral mines in Gaul, which have been ſince either neglected or exhauſted. Strabo mentions ſome of them, amongſt which are thoſe of Tarbæ, that were, as he ſays, *very fruitful in gold*. For, without digging far, they found it in quantities large enough to fill the palm of the hand, which had no great occaſion for being refined. They had alſo

Strab. l. 4. p. 190.

abundance

abundance of gold duſt, and gold in grains of equal goodneſs with the other. Budæus.

To the gold, continues Pliny, which was found to have a fifth part of ſilver in it, they gave the name of ELECTRUM. It might be called white gold, becauſe it came near that colour, and is paler than the other.) The moſt antient people ſeemed to have ſet a great value upon it. Homer, in his deſcription of Menelaus's palace, ſays, it ſhone univerſally with gold, electrum, ſilver, and ivory. The electrum has this property peculiar to it, that it brightens much more by the light of lamps than either gold or ſilver. Odyſ. l. 4. v. 71.

SECT. IV.

Silver-mines.

SILVER-MINES, in many reſpects, reſemble thoſe of gold. The earth is bored, and long caverns cut on the right or left, according to the courſe of the vein. The colour of the metal does not enliven the hopes of the workmen, nor the ore glitter and ſparkle as in the others. The earth which contains the ſilver is ſometimes reddiſh, and ſometimes of an aſh colour; which the workmen diſtinguiſh by uſe. As for the ſilver, it can be only refined by fire, with lead, or with * pewter-ore. This ore is called *galena*, and found commonly in the veins of ſilver mines. The fire only ſeparates theſe ſubſtances; the one of which it reduces into lead or pewter, and the other into ſilver; but the laſt always ſwims at top, becauſe it is lighteſt, almoſt like oil upon water. Plin. l. 33. c. 6.

There were ſilver-mines in almoſt all the provinces of the Roman empire. That metal was

* *This ore is the rude and mixed ſubſtance which contains the metal. It is commonly called the* Marcaſite ſtone, *eſpecially with relation to gold and ſilver.*

found

found in Italy near Vercellæ; in Sardinia, where there was abundance of it; in several places of the Gauls; even in Britain; in Alsace, witness Strasburgh, which took its name *Argentoratum*, as Colmar did *Argentaria*, from it; in Dalmatia and Pannonia, now called Hungary; and, lastly, in Spain and Portugal, which produced the finest gold.

What is most surprising in the mines of Spain, is, that the works, begun in them by Hannibal's * orders, subsist in our days, says Pliny; that is to say, above three hundred years; and that they still retain the names of the first discoverers of them, who were all Carthaginians. One of these mines, amongst the rest, exists now, and is called *Bebulo*. It is the same from which Hannibal daily extracted three hundred pounds of silver, and has been run fifteen hundred paces in extent, and even through the mountains, by the † Accitanian people; who, without resting themselves, either by night or day, and supporting themselves only by the aid of their lamps, have drawn off all the water from them. There are also veins of silver, discovered in that country, almost upon the surface of the earth.

Plin. ibid.

For the rest, the antients easily knew when they were come to the end of the vein, which was when they found allum; after that, they searched no farther, though lately, (it is still Pliny who speaks) beyond the allum, they have found a white vein of copper, which served the workmen as a new token, that they were at the end of the vein of silver.

The discovery of the metals we have hitherto spoken of, is a wonder we can never sufficiently admire. There was nothing more hidden in nature than gold and silver. They were buried deep in

* *When he went thither to besiege Saguntum.*

† *The people of Murcia and Valentia, which were part of the district of new Carthage.*

the

the earth, mingled with the hardeſt ſtones, and in appearance perfectly uſeleſs; the parts of theſe precious metals were ſo confounded with foreign bodies, ſo imperceptible from that mixture, and ſo difficult to ſeparate, that it did not ſeem poſſible to cleanſe, collect, refine, and apply them to their uſes. Man, however, has ſurmounted this difficulty, and, by experiments, has brought his firſt diſcoveries to ſuch perfection, that one would imagine gold and ſilver were formed from the firſt in ſolid pieces, and were as eaſily diſtinguiſhed as the flints, which lie on the ſurface of the earth. But was man of himſelf capable of making ſuch diſcoveries? Cicero* ſays, in expreſs terms, that God had in vain formed gold, ſilver, copper, and iron, in the bowels of the earth, if he had not vouchſafed to teach man the means, by which he might come at the veins, that conceal thoſe precious metals.

SECT. VI.

Product of gold and ſilver mines, one of the principal ſources of the riches of the antients.

IT is eaſy to conceive that mines of gold and ſilver muſt have produced great profits to the private perſons and princes who poſſeſſed them, if they took the leaſt trouble to work them.

Philip, the father of Alexander the Great, had gold-mines near Pydna, a city of Macedonia, from which he drew yearly a thouſand talents, that is to ſay, three millions. He had alſo other mines of gold and ſilver in Theſſaly and Thrace; and it appears, that theſe mines ſubſiſted as long as the Diod. l. 16. Juſtin. l. 8. c. 3. Strab. l. 7. p. 331.

* Aurum & argentum, æs & ferrum fruſtrà natura divina genuiſſet, niſi eadem docuiſſet quemadmodum ad eorum venas perveniretur. *De Divinat.* l. 1. n. 116.

kingdom of Macedonia; for * the Romans, when they had conquered Perſeus, prohibited the uſe and exerciſe of them to the Macedonians.

The Athenians had ſilver mines not only at Laurium in Attica, but particularly in Thrace, from which they were great gainers. Xenophon mentions many citizens enriched by them. Hipponius had ſix hundred ſlaves: Nicias, who was killed in Sicily, had a thouſand. The farmers of their mines paid daily to the firſt fifty livres, clear of all charges, allowing an obolus † a day for each ſlave; and as much in proportion to the ſecond, which amounted to a conſiderable revenue.

Xenoph. de ration. redit.

Xenophon, in the treatiſe wherein he propoſes ſeveral methods for augmenting the revenues of Athens, gives the Athenians excellent advice upon this head, and exhorts them, above all, to make commerce honourable; to encourage and protect thoſe, who applied themſelves to it, whether citizens or ſtrangers; to advance money for their uſe, taking ſecurity for the payment; to ſupply them with ſhips for the tranſportation of merchandiſe; and to be aſſured, that, with regard to trade, the opulence and ſtrength of the ſtate conſiſted in the wealth of individuals, and of the people. He inſiſts very much in relation to mines, and is earneſt that the republic ſhould cultivate them in its own name, and for its own advantage, without being afraid of injuring particulars in that conduct; becauſe they ſufficed for the enriching both the one and the other, and that mines were not wanting to workmen, but workmen to the mines.

But the produce of the mines of Attica and Thrace was nothing in compariſon with what the Spaniſh mines produced. The Tyrians had the

* Metalli quoque Macedonici, quod ingens vectigal erat, locationes tolli placebat. *Liv.* l. 45. n. 18.

† *Six oboli made one drachma, which was worth ten pence French; a hundred drachmas a mina, and ſixty minæ, a talent.*

firſt

firſt profits of them; the inhabitants of the country not knowing their value. The Carthaginians ſucceeded them; and as ſoon as they had ſet foot in Spain, perceived the mines would be an inexhauſtible ſource of riches for them. Pliny informs us, that one of them alone ſupplied Hannibal daily with three hundred pounds of ſilver, which amounts to twelve thouſand ſix hundred livres; as the ſame Pliny obſerves elſewhere. Plin. l. 33. c. 6.

Polybius, cited by Strabo, ſays, that in his time there were forty thouſand men employed in the mines in the neighbourhood of Carthagena, and that they paid daily twenty-five thouſand drachmas to the Roman people, that is, twelve thouſand five hundred livres. Ibid. c. 9.

Hiſtory mentions private perſons, who had immenſe and incredible revenues. Varro ſpeaks of one Ptolomy, a private perſon, who, in the time of Pompey, commanded in Syria, and maintained eight thouſand horſe, at his own expences; and had generally a thouſand gueſts at his table, who had each a gold cup, which was changed at every courſe. This is nothing to Pythius of Bithynia, who made king Darius a preſent of the *Plantane* and *Vine*, ſo much extolled in hiſtory, both of maſſy gold, and feaſted the whole army of Xerxes one day in a ſplendid manner, though it conſiſted of ſeventeen hundred thouſand men; offering that prince five months pay for that prodigious hoſt, and the neceſſary proviſions for the whole time. From what ſource could ſuch enormous treaſures ariſe, if not principally from the mines of gold and ſilver poſſeſſed by theſe particulars? Varr. apud Plin. l. 33. c. 10. Plin. ibid. Herod. l. 7. c. 27.

We are ſurpriſed to read in Plutarch, the account of the ſums carried to Rome, for the triumphs of Paulus Emilius, Lucullus, and many other victorious generals.

But all this is is inconſiderable to the endleſs millions amaſſed by David and Solomon, and em-

ployed in the building and ornaments of the temple of Jeruſalem. Thoſe immenſe riches, of which the recital aſtoniſhes us, were partly the fruits of the commerce eſtabliſhed by David in Arabia, Perſia, and Indoſtan, by the means of two ports he had cauſed to be built in Idumæa, at the extremity of the Red ſea; which trade Solomon muſt have conſiderably augmented, as, in one voyage only, his fleet brought home four hundred and fifty talents of gold, which amount to above one hundred and thirty-five millions of livres. Judæa was but a ſmall country, and nevertheleſs the annual revenue of it in the time of Solomon, without reckoning many other ſums, amounted to ſix hundred and ſixty-ſix talents of gold, which make near two hundred millions of livres. Many mines muſt have been dug in thoſe days, for ſupplying ſo incredible a quantity of gold; and thoſe of Mexico and Peru were not then diſcovered.

Eloth and Ezionegber.

2 Chron. viii. 18.

2 Chron. ix. 13.

SECT. VI.

Of coins and medals.

THOUGH commerce began by the exchange of commodities, as appears in Homer; experience ſoon made the inconvenience of that traffic evident, from the nature of the ſeveral merchandiſes, that could neither be divided, nor cut without conſiderable prejudice to their value; which obliged the dealers in them, by little and little, to have recourſe to metals, which diminiſhed neither in goodneſs nor fabric by diviſion. Hence, from the time of Abraham, and without doubt before him, gold and ſilver were introduced in commerce, and, perhaps, copper alſo for the leſſer wares. As frauds were committed in regard to the weight and quality of the metal, the civil government and public authority interpoſed, for eſtabliſhing

bliſhing the ſecurity of commerce, and ſtamped metals with impreſſions to diſtinguiſh and authorize them. From thence came the various dyes for money, the names of the coiners, the effigies of princes, the years of conſulſhips, and the like marks.

The Greeks put enigmatical hieroglyphics upon their coins, which were peculiar to each province. The people of Delphos repreſented a dolphin upon theirs: this was a kind of ſpeaking blazonry: the Athenians the bird of their Minerva, the owl, the ſymbol of vigilance, even during the night: the Bœotians a Bacchus, with a bunch of grapes and a large cup, to imply the plenty and deliciouſneſs of their country: the Macedonians a ſhield, in alluſion to the force and valour of their ſoldiery: the Rhodians the head of Apollo, or the ſun, to whom they dedicated their famous Coloſſus. In fine, every magiſtrate took pleaſure to expreſs in his money the glory of his province, or the advantages of his city.

The making bad money has been practiſed in all ages and nations. In the firſt payment made by the * Carthaginians of the ſum, to which the Romans had condemned them at the end of the ſecond Punic war, the money brought by their ambaſſadors was not of good alloy, and it was diſcovered, upon melting it, that the fourth part was bad. They were obliged to make good the deficiency by borrowing money at Rome. Antony, the Triumvir, at the time of his greateſt neceſſity, cauſed iron to be mixed with the money coined by his order. Plin. l. 33. c. 9.

This bad coin was either made by a mixture of copper, or wanted more or leſs of its juſt weight.

* Carthaginenſes eo anno argentum in ſtipendium impoſitum primùm Romam advexerunt. Id quia probum non eſſe quæſtores renunciaverant, ex percentibuſque pars quarta decocta erat pecuniâ Romæ mutua ſumptâ intertrimentam ſuppleverunt. *Liv.* l. 32. n. 2.

A pound of gold and ſilver ought to be, as Pliny obſerves, fourſcore and ſixteen, or an hundred drachmas in weight. Marius Gratidianus, brother of the famous Marius, when he was prætor, ſuppreſſed ſeveral diſorders at Rome, relating to the coin, by wiſe regulations. The people, always ſenſible of amendments of that kind, to expreſs their gratitude, erected ſtatues to him in all the quarters of that city: It was * this Marius, whom Sylla, to avenge the cruelties committed by his brother, ordered to have his hands cut off, his legs broken, and his eyes put out, by the miniſtration of Catiline.

Flor. l. 3. c. 21. Senec. de ira, l. 3. c. 18.

The inconveniencies of exchanges were happily remedied by the coining of gold and ſilver ſpecies, that became the common price for all merchandiſe, of which the painful, and often uſeleſs, carriage, was thereby ſaved. But the antient commerce was ſtill in want of another advantage, which has been ſince wiſely contrived. I mean the method of remitting money from place to place, by bill directing the payment of it.

It is not eaſy to diſtinguiſh with certainty the difference between coins and medals, opinions differing very much upon that head. What ſeems moſt probable is, that a piece of metal ought to be called coin, when it has, on one ſide, the head of the reigning prince, or ſome divinity, and is always the ſame on the reverſe. Becauſe money being intended to be always current, the people ought to know it with eaſe, that they may not be ignorant of its value. Thus the head of Janus, with the beak of a galley on the reverſe, was the firſt money of Rome. Servius Tullius, inſtead of the head of a ſhip, ſtamped that of a ſheep, or an ox,

Plin. l. 33. c. 3.

* M. Mario, cui vicatim populus ſtatuas poſuerat, cui thurr & vino Romanus Populus ſupplicabat. L. Sylla perfringi crura, oculos erui, amputari manus juſſit; & quaſi toties occideret, quoties vulnerabat, paulatim & per ſingulos artus laceravit. *Senec.*

on

on it, from whence came the word *pecunia*, becauſe thoſe animals were of the kind called *pecus*. To the head of Janus, a woman armed was afterwards ſubſtituted, with the inſcription ROMA; and on the other ſide, a chariot drawn by two or four horſes, of which were the pieces of money called *Bigati*, and *Quadrigati*. Victories were alſo put on them, *Victoriati*. All theſe different ſpecies are allowed to be coins, as are thoſe which have certain marks on them; as an X, that is to ſay *Denarius*; an L, *Libra*; an S, *Semis*. Theſe different marks explain the weight and value of the piece.

Medals are pieces of metal, which generally expreſs on the reverſe ſome conſiderable event.

The parts of a medal are its two ſides, of which the one is called the face or head, and the other the reverſe. On each ſide of it there is a field, which is the middle of the medal; the circumference or border; and the exergue, which is the part at the bottom of the piece, upon which the figures repreſented by the medal are placed. Upon theſe two faces the type, and the inſcription or legend, are diſtinguiſhed. The figures repreſented are the type; the inſcription or legend is the writing we ſee on it, and principally that upon the border or circumference of the medal.

To have ſome idea of the ſcience of medals, it is neceſſary to know their origin and uſe; their diviſion into antient and modern, into Greek and Roman; what is meant by the medals of the early or later empire; of the great or ſmall bronze; what a ſeries is in the language of antiquarians. But this is not the proper place for explaining all theſe things. The book of father Joubert the jeſuit, on the knowledge of medals, contains what is neceſſary to be known, when a profound knowledge of them is not required.

I content myſelf with informing young perſons, who are deſirous to ſtudy hiſtory in all its extent, that the knowledge of medals is abſolutely neceſſary

to that kind of learning. For hiſtory is not to be learnt in books only, which do not always tell the whole, or the truth of things. Recourſe muſt therefore be had to pieces, which ſupport it; and which neither malice nor ignorance can injure or vary; and ſuch are the monuments which we call medals. A thouſand things, equally important and curious are to be learnt from them, which are not to be found elſewhere. The pious and learned author of the memoirs upon the hiſtory of the emperors gives us a proof and model of the uſe which may be made of the knowledge of medals.

Mr. Tillemont.

As much may be ſaid of antique ſeals and carved ſtones, which have this advantage of medals, that being of a harder ſubſtance, and repreſenting the figures upon them in hollow, they preſerve them perpetually in all their perfection; whereas medals are more ſubject to ſpoil, either by being rubbed, or by the corroſion of ſaline particles, to which they are always expoſed. But to make amends, the latter being all of them far more abundant than the former in their various ſpecies, they are of much greater uſe to the learned.

The royal academy of *inſcriptions and polite learning*, eſtabliſhed and renewed ſo ſucceſsfully under the preceding reign, and which takes in all erudition, antient and modern for its object, will not a little contribute to preſerve amongſt us, not only a good taſte for inſcriptions and medals, which conſiſts in a noble ſimplicity; but one in general for all works of wit, that are principally founded upon antient authors, whoſe writings this academy make their peculiar ſtudy. I dare not expreſs here all that I think of a ſociety, into which I am admitted, and of which I am a member. I was choſen into it upon its being revived, without making any intereſt for ſo honourable a place, and indeed without knowing any thing of it; an introduction, in my opinion, highly worthy of learned Bodies. I could

wiſh

wiſh that I had merited it better, and had diſcharged the functions of a fellow of the academy with greater abilities.

SECT. VII.

Of pearls.

THE pearl is an hard, white, clear ſubſtance, which forms itſelf in the inſide of a certain kind of oyſters.

The teſtaceous fiſh, in which the pearls are found, is three or four times as large as the common oyſter. It is commonly called *pearl*, or *mother of pearl*.

Each mother of pearl generally produces ten or twelve pearls. An author, however, who has treated of their production, pretends to have ſeen to the number of an hundred and fifty in one of them, but in various degrees of perfection. The moſt perfect always appear the firſt, the reſt remain under the oyſter, at the bottom of the ſhell.

Pearl-fiſhing amongſt the antients was followed principally in the Indian ſeas, as it ſtill is, as well as in thoſe of America, and ſome parts of Europe. The divers, under whoſe arms a cord is tied, of which the end is made faſt to the bark, go down into the ſea ſeveral times ſucceſſively, and after having torn the oyſters from the rocks, and filled a baſket with them, they come up again with great agility.

This fiſhing is followed in a certain ſeaſon of the year. The oyſters are commonly put into the ſand, where they corrupt by the extraordinary heat of the ſun; and opening of themſelves ſhew their pearls, which, after that, it is ſufficient to clean and dry.

The other precious ſtones are quite rough, when taken from the rocks, where they grow, and derive their

their luſtre only from the induſtry of man. Nature alone furniſhes the ſubſtance which art muſt finiſh by cutting and poliſhing. But, as to pearls, that clear and ſhining * water, for which they are ſo much eſteemed, comes into the world with them. They are found compleatly poliſhed in the abyſſes of the ſea, and nature puts the laſt hand to them before they are torn from their ſhells.

The † perfection of pearls, according to Pliny, conſiſts in their being of a glittering whiteneſs, large, round, ſmooth, and of a great weight, qualities ſeldom united in the ſubject.

Plin. l. 9. c. 35. It is chimerical to imagine, that pearls take birth from dew drops; that they are ſoft in the ſea, and only harden when the air comes to them; that they waſte and come to nothing, when it thunders, as Pliny and ſeveral authors after him ſay.

Many things are highly prized only for being ſcarce, whoſe ‡ principal merit conſiſts in the danger people are at to get them. It is ſtrange that men ſhould ſet ſo ſmall a value upon their lives, and ſhould judge them of leſs worth than ſhells hidden in the ſea. If it were neceſſary, for the acquiring of wiſdom, to undergo all the pains taken to find ſome pearl of uncommon beauty and magnitude, (and as much may be ſaid of gold, ſilver, and precious ſtones) we ought not to be a moment in reſolving to venture life, and that often for ſuch ineſtimable treaſure. Wiſdom is the greateſt of all fortunes; a pearl the moſt frivolous of riches: men, however, do nothing for the former, and hazard every thing for the latter.

* *In the terms of jewellers, they call the ſhining colour of pearls water, from their being ſuppoſed to be made of water. Hence the pearl-pendants of Cleopatra were ſaid to be ineſtimable, both for their* water *and large ſize.*

† Dos omnis in candore, magnitudine orbe, livore, pondere; haud promptis rebus. *Plin.* l. 9. c. 35.

‡ Animâ hominis quæſita maxime placent. *Plin.* ibid.

SECT.

SECT. VIII.

PURPLE.

STUFFS dyed with purple were one of the moſt conſiderable branches of the commerce of the antients, eſpecially of Tyre, which by induſtry and extreme ſkill had carried that precious dye to the higheſt poſſible degree of perfection. The purple diſputed value with gold itſelf in thoſe remote times, and was the diſtinguiſhing mark of the greateſt dignities of the univerſe, being principally appropriated to * princes, kings, ſenators, conſuls, dictators, emperors, and thoſe to whom Rome granted the honour of a triumph.

The purple is a colour, compounded between red and violet, taken from a ſea-fiſh covered with † a ſhell, called alſo *The purple.* Notwithſtanding various treatiſes written by the moderns upon this colour ſo highly prized by the antients, we are little acquainted with the nature of the liquor which produced it. Ariſtotle and Pliny have left many remarkable things upon this point, but ſuch as are more proper to excite, than fully to ſatisfy curioſity. The latter, who has ſpoken the moſt at large upon the preparation of purple, has confined all he ſays of it to a few lines. Theſe might ſuffice for the deſcription of a known practice in thoſe times; but is too little to give a proper idea of it to ours, after the uſe of it has ceaſed for many ages.

Ariſt. de Hiſt. Anim. l. 5. c. 15.

Plin. l. 9. c. 38.

Pliny divides the ſeveral ſpecies of ſhells, from which the purple dye is taken, into two kinds; the firſt of which includes the ſmall kind of *Buccinum*, ſo called from the reſemblance between that fiſh's ſhell and a hunting-horn; and the ſecond the ſhells called purple, from the dye they contain.

Plin. l. 9. c. 39.

* Color nimio lepore vernans, obſcuritas rubens, nigredo ſanguinea regnantem diſcernit, dominum conſpicuum facit, & præſtat humano generi ne de conſpectu principis poſſit errari. *Caſſiod.* l. 1. *Var. Ep.* 2.

† *From thence purple habits are called in Latin,* conchyliatæ veſtes.

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It is believed that this latter kind were called alſo *Murex*.

Jul. Pollux. l. 1. c. 4. Caſſiod. l. 1. Var. Ep. 2.

Some authors affirm, that the Tyrians diſcovered the dye we ſpeak of by accident. An hungry dog having broke one of theſe ſhells with his teeth upon the ſea-ſide, and devoured one of theſe fiſh, all around his mouth and throat were dyed by it with ſo fine a colour, that it ſurpriſed every body that ſaw it, and gave birth to the deſire of making uſe of it.

Plin. l. 9. c. 36—39.

The purple * of Getulia in Africa, and that of † Laconia in Europe, were in great eſtimation; but the Tyrian in Aſia was preferred to all others; and that principally which was twice dipt, called for that reaſon *dibapha*. A pound of it was ſold at Rome for a thouſand denarii, that is, five hundred livres.

The *Buccinum* and *Murex* ſcarce differed in any thing but the bigneſs of ſhell, and the preparation of them. The *Murex* was fiſhed for generally in the open ſea; whereas the *Buccinum* was taken from the ſtones and rocks to which it adhered. I ſhall ſpeak here only of the *Buccinum*, and ſhall extract a ſmall part of what I find upon it, in the learned diſſertation of Monſieur Reaumur.

Memoirs of the Acad. of Sciences. An 1711.

The liquor could not be extracted from the *Buccinum*, without employing a very conſiderable length of time for that purpoſe. It was firſt neceſſary to break the hard ſhell, that covered them. This ſhell being broke at ſome diſtance from its opening, or the head of the *Buccinum*, the broken pieces were taken away. A ſmall vein then appeared, to uſe the expreſſion of the antients; or with greater propriety of ſpeech, a ſmall reſervoir, full of the pro-

* Veſtes Getulo murice tectas. HOR.
Robes with Getulian purple dy'd.

† Nec Laconicas mihi
Trahunt honeſtæ purpuras clientæ. HOR.
Nor do my noble clients wives with care
Laconia's purple ſpin for me to wear.

per

per liquor for dying purple. The colour of the liquor contained in this ſmall reſervoir, made it very diſtinguiſhable, and differs much from the fleſh of the animal. Ariſtole and Pliny ſay, it is white; and it is indeed inclining to white, or between white and yellow. The little reſervoir, in which it is contained, is not of equal bigneſs in all the *Buccina*; it is, however, commonly about a line, the twelfth part of an inch in breadth, and two or three in length.——It was this little reſervoir the antients were obliged to take from the *Buccinum*, in order to ſeparate the liquor contained in it. They were under a neceſſity of cutting it from each fiſh, which was a tedious work, at leaſt with regard to what it held: for there is not above a large drop of liquor in each reſervoir. From whence it is not ſurpriſing that fine purple ſhould be of ſo high a price amongſt them.

Ariſtotle and Pliny ſay indeed, that they did not take the pains to cut theſe little veſſels from the ſmaller fiſh of this kind ſeparately, but only pounded them in mortars, which was a means to ſhorten the work conſiderably. Vitruvius ſeems even to give this as the general preparation. It is, however, not eaſy to conceive, how a fine purple colour could be attained by this means. The excrements of the animal muſt conſiderably change the purple colour, when heated together, after being put into the water. For that ſubſtance is itſelf of a brown, greeniſh colour, which, no doubt, it communicated to the water, and muſt very much have changed the purple colour; the quantity of it being exceedingly greater than that of the liquor. Architect. l. 7. c. 13.

In the preparation of purple, the cutting out the ſmall reſervoir of liquor from each *Buccinum*, was not the whole trouble. All thoſe ſmall veſſels were afterwards thrown into a great quantity of water, which was ſet over a ſlow fire for the ſpace of ten hours. As this mixture was left ſo long upon the fire, it was impoſſible for it not to take the purple

purple colour: it took it much ſooner, as I am well convinced, ſays Mr. Reaumur, by a great number of experiments. But it was neceſſary to ſeparate the fleſhy parts, or little veſſels, wherein the liquor was contained; which could not be done without loſing much of the liquor, but by making thoſe fleſhy membranes diſſolve in hot water, to the top of which they roſe at length in ſcum, which was taken off with great care.

This was one manner in which the antients made the purple dye; that was not intirely loſt, as is believed, or at leaſt, was diſcovered again about fifty years ago by the royal ſociety of England. One ſpecies of the ſhells from which it is extracted, a kind of *Buccinum*, is common on the coaſt of that country. The obſervations of an Engliſhman upon this new diſcovery, were printed in the journals of France in 1686.

Another *Buccinum*, which gives alſo the purple dye, and is evidently one of thoſe deſcribed by Pliny, is found upon the coaſt of Poitou. The greateſt ſhells of this kind are from twelve to thirteen lines (of an inch) in length, and from ſeven to eight in diameter, in the thickeſt part of them. They are a ſingle ſhell turned ſpirally, like that of a garden ſnail, but ſomewhat longer.

In the journal of the learned for 1686, the various changes of colour through which the *Buccinum*'s liquor paſſes are deſcribed. If inſtead of taking out the veſſel which contains it according to the method of the antients, in making their purple, that veſſel be only opened, and the liquor preſſed out of it, the linnen or other ſtuffs, either of ſilk or wool, that imbibe this liquor, will appear only of a yellowiſh colour. But the ſame linnen or ſtuffs, expoſed to a moderate heat of the ſun, ſuch as it is in ſummer-mornings, in a few hours take very different colours. That yellow begins at firſt to incline a little to the green; thence it becomes of a lemon colour. To that ſucceeds a livelier green, which

which changes into a deep green; this terminates in a violet colour, and afterwards fixes in a very fine purple. Thus theſe linnens or ſtuffs, from their firſt yellow, proceed to a fine purple through all the various degrees of green. I paſs over many very curious obſervations of Monſieur Reaumur's upon theſe changes, which do not immediately come into my ſubject.

It ſeems ſurpriſing, that Ariſtotle and Pliny, in ſpeaking of the purple dye, and the ſhells or ſeveral countries from which it is extracted, ſhould not ſay a word of the changes of colour, ſo worthy of remark, through which the dye paſſes before it attains the purple. Perhaps not having ſufficiently examined theſe ſhells themſelves, and being acquainted with them only from accounts little exact, they make no mention of changes which did not happen in the ordinary preparation of purple; for, in that, the liquor being mingled in cauldrons with a great quantity of water, it turned immediately red.

Mr. Reaumur, in the voyage he made in the year 1710, upon the coaſt of Poitou, in conſidering the ſhells called *Buccinum*, which the ſea in its ebb had left upon the ſhore, he found a new ſpecies of purple dye, which he did not ſearch after; and which, according to all appearances, had not been known to the antients, though of the ſame ſpecies with their own. He obſerved that the *Buccina* generally thronged about certain ſtones, and arched heaps of ſand, in ſuch great quantities, that they might be taken up there by handfuls, though diſperſed and ſingle every-where elſe. He perceived, at the ſame time, that thoſe ſtones or heaps of ſand were covered with certain grains, of which the form reſembled that of a ſmall oblong bowl. The length of theſe grains was ſomewhat more than three lines, (a quarter of an inch) and their bigneſs ſomething above one line. They ſeemed to him to contain white liquor inclining to yellow. He preſſed out the juice of ſome of them upon his ruffle, which

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at first seemed only a little soiled with it; and he could perceive with difficulty, only a small yellowish speck here and there in the spot. The different objects, which diverted his attention, made him forget what he had done, and he thought no farther of it, till casting his eyes, by accident, upon the same ruffle, about a quarter of an hour after, he was struck with an agreeable surprise, to see a fine purple colour on the places where the grains had been squeezed. This adventure occasioned many experiments, which give a wonderful pleasure in the relation, and shew what great advantage it is to a nation to produce men of a peculiar genius, born with a taste and natural disposition for making happy discoveries in the works of nature.

Mr. Reaumur remarks, that the liquor was extracted from these grains, which he calls *the eggs of purple*, in an infinitely more commodious manner, than that practised by the antients for the liquor of the *Buccinum*. For there was nothing more to do, after having gathered these eggs, than to have them well washed in the sea-water, to take off as much as possible the filth which might change the purple colour by mixing with it; there was, I say, nothing more to do than to put them into clean cloths. The liquor was then pressed out, by twisting the ends of these cloths different ways, in the same manner almost that the juice is pressed out of gooseberries to make jelly. And to abridge this trouble still more, small presses might be used, which would immediately press out all the liquor. We have seen before, how much time and pains were necessary for extracting the liquor from the *Buccina*.

Plin. l. 22. c. 2. The *Coccus* or *Coccum* supplied the antients with the fine colour and dye we call scarlet, which in some measure disputed beauty and splendor with purple. Quintilian * joins them together; where

* Quid non adultus concupiscet, qui in purpuris repit? Nondum prima verba exprimit, & jam coccum intelligit, jam conchylium poscit. *Quintil.* l. 1. c. 1.

he

he complains, that the parents of his times dreſſed their children, from their cradles in ſcarlet and purple, and inſpired them in that early age, with a taſte for luxury and magnificence. Scarlet, according to * Pliny, ſupplied men with more ſplendid garments than purple, and at the ſame time more innocent, becauſe it was not neceſſary to hazard life in attaining it.

Scarlet is generally belived the ſeed of a tree, of the holm-tree kind. It has been diſcovered to be a ſmall round excreſcence, red, and of the bigneſs of a pea, which grows upon the leaves of a little ſhrub, of the holm ſpecies, called *ilex aculeata cocciglandifera*. This excreſcence is cauſed by the bite of an inſect, which lays its eggs in it. The Arabians term this grain *Kermes*; the Latins, *Coccus* and *vermiculas*; from whence the words *vermilion*, and *Cuſculum* or *quiſquilium*, are derived. A great quantity of it is gathered in Provence and Languedoc. The water of the Gobelin's river is proper for dying ſcarlet.

There are two kinds of ſcarlet. The ſcarlet of France or of the Gobelins, which is made of the grain I have mentioned; and the ſcarlet of Holland, which derives itſelf from cochineal. This is a drug that comes from the Eaſt-Indies. Authors do not agree upon the nature of cochineal. Some believe it a kind of worm, and others that it is only the ſeed of a tree.

The firſt kind is ſeldom uſed ſince the diſcovery of cochineal, which produces a much more beautiful and lively ſcarlet than that of the *Kermes*, which is deeper, and comes nearer to the Roman purple. It has, however, one advantage of the cochineal-

* Tranſalpina Gallia herbis Tyrium atque conchylium tingit, omneſque alios colores. Nec quærit in profundis murices—ut inveniat per quod matrona adultero placeat, corruptor inſidietur nuptæ. Stans & in ſicco carpit, quo fruges modo. *Plin.*

ſcarlet; which is, that it does not change colour when wet falls upon it, as the other does, that turns blackiſh immediately after.

SECT. IX.

Of ſilken ſtuffs.

SILK, as Monſieur Mahudal obſerves in the diſſertation * he has given us on this ſubject, of which I ſhall make great uſe in this place; ſilk, I ſay, is one of the things made uſe of for many ages almoſt through all Aſia, in Africa, and many parts of Europe, without peoples knowing what it was; whether it was, that the people's amongſt whom it grew, gave ſtrangers little acceſs to them; or that, jealous of an advantage peculiar to themſelves, they apprehended being deprived of it by foreigners. It was undoubtedly from the difficulty of being informed of the origin of this precious thread ſo many ſingular opinions of the moſt antient authors took birth.

Herod. l. 3. c. 106.

To judge of the deſcription Herodotus makes of a kind of wool much finer and more beautiful than the ordinary kind, and which, he ſays, was the growth of a tree in the Indies, (the moſt remote country known by the eaſtern people of his times to the eaſtward) that idea ſeems the firſt they had of ſilk. It was not extraordinary, that the people ſent into that country to make diſcoveries, ſeeing only the bags of the ſilk-worms hanging from the trees in a climate, where thoſe inſects breed, feed upon the leaves, and naturally aſcend the branches, ſhould take thoſe bags for lumps of wool.

It is likely, that Theophraſtus, upon the relation of thoſe miſtaken perſons, might conceive theſe

* *Memoirs of the academy of Inſcriptions*, Vol. V.

a real

a real ſpecied of trees, and rank them in a particular claſs, which he enumerates, of trees bearing wool. There is good reaſon to believe Virgil of the ſame opinion:

Velleraque ut foliis depectant tenuia Seres.
Georg. l. 2. v. 121.
As India's ſons
Comb the ſoft ſlender fleeces of the bough.

Ariſtotle, though the moſt antient of the naturaliſts, has given a deſcription of an inſect that comes neareſt the ſilk-worm. It is where he ſpeaks of the different ſpecies of the caterpillar, that he deſcribes one, which comes from an horned worm, to which he does not give the name of Βόμβυξ, till it has ſhut itſelf up in a cod or bag, from whence, he ſays, it comes out a butterfly; it paſſes through theſe ſeveral changes, according to him, in ſix months. Ariſt. l. 5. hiſt. anim. c. 19.

About four hundred years after Ariſtotle, Pliny, to whom that philoſopher's hiſtory of animals was perfectly known, has repeated the ſame fact literally in his own. He places alſo, under the name *Bombyx*, not only this ſpecies of worm, which, as ſome report produced the ſilk of Cos; but ſeveral other caterpillars found in the ſame iſland, that he ſuppoſes to form there the cods or bags, from which, he ſays, the women of the country ſpin ſilk, and make ſtuffs of great fineneſs and beauty. Plin. l. 11. c. 22, 23.

Pauſanias, that wrote ſome years after Pliny, is the firſt who informs us, that this worm was of Indian extraction, and that the Greeks called it Σηρικὸς, from whence it derived the name of *Seres*, the inhabitants of the Indies, amongſt whom we are ſince convinced, this inſect was firſt found. Pauſan. l. 6. p. 394.

The worm, which produces ſilk, is an inſect ſtill leſs wonderful, for the precious matter it ſupplies for the making of different ſtuffs, than for

the various forms it takes, either before or after its having wrapped itſelf up in the rich bag, or cod, it ſpins for itſelf. From the grain or egg it is at firſt, it becomes a worm of conſiderable ſize, and of a white colour inclining to yellow. When it is grown large, it incloſes itſelf within its bag, where it takes the form of a kind of grey bean, in which there ſeems neither life nor motion. It comes to life again to take the form of a butterfly, after having made itſelf an opening through its tomb of ſilk. At laſt, dying in reality, it prepares itſelf, by the egg or ſeed it leaves, a new life, which the fine weather and the heat of the ſummer are to aſſiſt it to reſume. In the firſt volume of the *Spectacle de la Nature*, may be ſeen a more extenſive and more exact deſcription of theſe various changes.

It is from this bag or cod, into which the worm ſhuts itſelf, that the different kinds of ſilken manufactures are made, which ſerve not only for the luxury and magnificence of the rich, but the ſubſiſtance of the poor, who ſpin, wind, and work them. Each bag or cod is found to contain more than nine hundred feet of thread; and this thread is double, and glued together throughout its whole length, which in conſequence amounts to almoſt two thouſand feet. How wonderful it is, that out of a ſubſtance ſo ſlight and fine, as almoſt to eſcape the eye, ſtuffs ſhould be compoſed of ſuch ſtrength, and duration, as thoſe made of ſilk! But what luſtre, beauty, and delicacy, are there in thoſe ſtuffs! It is not ſurpriſing, that the commerce of the antients conſiſted conſiderably in them; and that, as they were very ſcarce in thoſe times, their price ran exceding high. Vopiſcus * aſſures us, that the emperor Aurelian, for that reaſon, refuſed

* Vellem holoſericam neque ipſe in veſtiario ſuo habuit, neque alteri utendum dedit. Ec cum ab eo uxor ſua peteret, ut unico pallio blatteo Serico uteretur, ille reſpondit: *Abſit, ut auro fila penſentur.* Libra enim auri tunc libra Serici fuit. *Vopiſc. in Aurel.*

the

the empreſs his wife an habit of ſilk, which ſhe earneſtly ſolicited him to give her; and that he ſaid to her: *The gods forbid that I ſhould purchaſe ſilk at the price of its weight in gold*; for the price of a pound of ſilk was at that time a pound of gold.

It was not till very late, that the uſe of ſilk was known and became common in Europe. The hiſtorian Procopius dates the æra of it about the middle of the fifth century, under the the emperor Juſtinian. He gives the honour of this diſcovery to two monks, who, ſoon after their arrival at Conſtantinople from the Indies, heard, in converſation, that Juſtinian, was extremely ſolicitous about depriving the Perſians, of their ſilk trade with the Romans. They found means to be preſented to him, and propoſed a ſhorter way to deprive the Perſians of that trade, than that of a commerce with the Ethiopians, which he had thoughts of ſetting on foot; and this was, by teaching the Romans the art of making ſilks for themſelves. The emperor, convinced by the account they gave him of the poſſibility of the means, ſent them back to Serinda (the city's name where they had reſided) to get the eggs of the inſects, which they told him could not be brought alive. Thoſe monks, after their ſecond voyage, returning to Conſtantinople, hatched the eggs, they had brought from Serinda, in warm dung. When the worms came out of them, they fed them with white mulberry leaves, and demonſtrated by the ſucceſs of that experiment all the mechaniſm of ſilk in which the emperor had deſired to be informed. Procop. l. 2. de bell. Vandal.

From that time the uſe of ſilk ſpread by degrees into ſeveral parts of Europe. Manufactures of it were ſet up at Athens, Thebes, and Corinth. It was not till about 1130, that Roger, king of Sicily, eſtabliſhed one at Palermo. It was at that time, in this iſland and Calabria, workment in ſilk were firſt ſeen, who were part of the booty that prince brought from the cities of Greece I have

mentioned, which he conquered in his expedition to the Holy Land. In fine, the reſt of Italy and Spain having learnt of the Sicilians and Calabrians to breed the worms, and to ſpin and work their ſilk, the ſtuffs made of it began to be manufactured in France, eſpecially in the ſouth parts of that kingdom, where mulberry-trees were raiſed with moſt eaſe. Lewis XI, in 1470, eſtabliſhed ſilken manufactures at Tours. The firſt workmen employed in them were brought from Genoa, Venice, Florence, and even from Greece. Works of ſilk were, however, ſo ſcarce even at court, that Henry II. was the firſt prince that wore ſilk ſtockings which he did at the nuptials of his ſiſter.

They are now become very common, but do not ceaſe to be one of the moſt aſtoniſhing wonders of nature. Have the moſt ſkilful artificers been able hitherto to imitate the curious work of the ſilk-worm? Have they found the ſecret to form ſo fine, ſo ſtrong, ſo even, ſo ſhining and ſo extended a thread? Have they a more valuable ſubſtance for the fabric of the richeſt ſtuffs? Do they know in what manner this worm converts the juice of a leaf into threads of gold? Can they give a reaſon why a matter, liquid before the air comes to it, ſhould condenſe and extend to infinitude afterwards? Can we explain how this worm comes to have ſenſe to form itſelf a retreat for the winter, within the innumerable folds of the ſilk, of which itſelf is the principal; and to expect, in that rich tomb, a kind of reſurrection, which ſupplies it with the wings its firſt birth had not given it? Theſe are the reflections made by the author of the new commentary upon Job, upon account of theſe words: *Quis * poſuit in nentibus ſapientiam? Who hath given Wiſdom to certain animals, that have the induſtry to ſpin?*

* *This, Mr. Rollin ſays in the margent, is the ſenſe, according to the Hebrew of the 36th verſe of the 38th chapter of Job: Which in the Engliſh verſion is only,* Who hath put wiſdom in the inward parts.

CON-

CONCLUSION.

FROM what has been ſaid hitherto, we may conclude commerce one of the parts of government, capable of contributing the moſt to the riches and plenty of a ſtate: and therefore that it merits the particular attention of princes and their miniſters. It does not appear indeed, that the Romans ſet any value upon it. Dazzled with the glory of arms, they would have believed it a diſgrace to them to have applied their cares to the intereſt of trade, and in ſome meaſure to become merchants: they, who believed themſelves intended by fate to govern mankind, and were ſolely intent upon the conqueſt of the univerſe. Neither does it ſeem poſſible, that the ſpirit of conqueſt and the ſpirit of commerce ſhould not mutually exclude each other in the ſame nation. The one neceſſarily introduces tumult, diſorder, and deſolation, and carries trouble and confuſion along with it into all places: the other, on the contrary, breathes nothing but peace and tranquillity. I ſhall not examine in this place, whether the averſion of the Romans for commerce were founded in reaſon; or if a people, ſolely devoted to war, are thereby the happier. I only ſay, that a king who truly loves his ſubjects, and endeavours to plant abundance in his dominions, will ſpare no pains to make traffic flouriſh and ſucceed in them without difficulty. It has been often ſaid, and it is a maxim generally received, that commerce demands only liberty and protection: liberty within wiſe reſtrictions, in not tying down ſuch as exerciſe it to the obſervance of inconvenient, burthenſome, and frequently uſeleſs regulations; protection in granting them all the ſupports they have occaſion for. We have ſeen the vaſt expences Ptolomy Philadelphus was at, in making commerce

flouriſh in Egypt; and how much glory the ſucceſs of his meaſures acquired him. An intelligent and well inclined prince will intermeddle only in commerce, to baniſh fraud and bad arts from it by ſeverity, and will leave all the profits to his ſubjects, who have the trouble of it; well convinced, that he ſhall find ſufficient advantages from it by the great riches it will bring into his dominions.

I am ſenſible that commerce has its inconveniencies and dangers. Gold, ſilver, diamonds, pearls, rich ſtuffs, in which it conſiſts in a great meaſure, contribute to ſupport an infinity of pernicious arts which tend only to enervate and corrupt a people's manners. It were to be deſired, that the commerce might be removed from a Chriſtian nation, which regards only ſuch things as promote luxury, vanity, effeminacy, and idle expences. But this is impoſſible. As long as bad deſires ſhall have dominion over mankind, all things, even the beſt, will be abuſed by them. The abuſe merits condemnation, but is no reaſon for aboliſhing uſes, which are not bad in their own nature. This maxim will have its weight with regard to all the ſciences I ſhall treat of in the ſequel of this work.

THE

THE HISTORY OF THE ARTS and SCIENCES OF THE ANCIENTS, &c.

INTRODUCTION.

Of the liberal arts. Honours rendered those who excelled in them.

WE come now to treat of the *arts* which are call *Liberal*, in opposition to such as are *Mechanic*, because the first are considered as the most noble and more immediately dependent upon the understanding. These arts are principally architecture, sculpture, painting, and music.

The arts as well as sciences have had their happy ages, in which they have appeared with greater splendor, and cast a stronger light: but, as the * historian observes, this splendor, this light, was soon obscured, and the duration of these times of perfection of no great continuance. It was longer in

* Hoc idem evenisse grammaticis, plastis, pictoribus, sculptoribus, quisquis temporum notis institerit reperiet, & eminentia cujusq; operis arctissimis temporum claustris circumdata. *Paterc.* l. 1.

Greece

Greece than in any other part of the world. To begin the reign of the liberal arts no higher than the time of Pericles, and make it endure only to the death of Alexander's firſt ſucceſſors, (and each of theſe Æras may be extended both at their beginning and end,) the ſpace will be at leaſt two hundred years, during which appeared a multitude of perſons illuſtrious for excelling in all the arts.

It is not to be doubted but rewards, honours, and emulation, contributed very much in forming theſe great men. What ardour muſt the laudable cuſtom have excited, which prevailed in many cities of Greece, of exhibiting in the ſhews ſuch as ſucceeded beſt in the arts of inſtituting public diſputes between them, and of diſtributing prizes to the victors, in the ſight and with the applauſes of an whole people!

Greece, as we ſhall ſoon ſee, thought herſelf obliged to render as much honour to the celebrated Polygnotus, as ſhe could have paid to Lycurgus and Solon; to prepare magnificent entries for him into the cities where he had finiſhed ſome paintings; and to appoint, by a decree of the Amphitryons, that he ſhould be maintained at the public expence in all the places to which he ſhould go.

What honours have not the greateſt princes paid in all ages to ſuch as diſtinguiſhed themſelves by the arts! We have ſeen Alexander the Great, and Demetrius Poliorcetes, forget their rank to familiarize themſelves with two illuſtrious painters, and come where they worked, to pay homage, in ſome manner, to the rare talents and ſuperior merit of thoſe extraordinary perſons.

Cav. Ridolphi in the life of Titian.

One of the greateſt emperors that reigned in the Weſt ſince Charlemagne, ſhewed the value he ſet upon painting when he made Titian Count Palatine, and honoured him with the golden key, and all the orders of knighthood.

Francis I,

Francis I, king of France, his illuſtrious rival as well in the actions of peace as thoſe of war, outdid him much, when he ſaid to the lords of his court of Leonardo da Vinci, then expiring in his arms: *You are in the wrong to wonder at the honour I pay this great painter; I can make a great many ſuch Lords as you every day, but only God can make ſuch a man as him I now loſe.* *Vaſari in the life of Leonardo da Vinci.*

Princes who ſpeak and act in this manner, do themſelves at leaſt as much honour as thoſe whoſe merit they extol and reſpect. * It is true, the arts, by the eſteem kings profeſs for them, acquire a dignity and ſplendor that render them more illuſtrious and exalted: but the arts, in their turn, reflect a like luſtre upon kings, and ennoble them alſo in ſome meaſure, in immortalizing their names and actions by works tranſmitted to the lateſt poſterity.

Paterculus, whom I have already cited upon the ſhort duration of arts when they have attained their perfection, makes another very true remark, confirmed not only by the experience of the remote, but later, ages; which is, † that great men in every kind, arts, ſciences, policy, and war, are generally cotemporaries.

If we recal the times when Apelles, Praxiteles, Lyſippus, and other excellent artiſts flouriſhed in Greece, we find her greateſt poets, orators, and philoſophers, were then alive. Socrates, Plato, Ariſtotle, Demoſthenes, Iſocrates, Thucydides, Xenophon, Æſchylus, Euripides, Sophocles, Ariſtophanes, Menander, and many others, lived all of them almoſt in the ſame age. What men, what

* De pictura, arte quondam nobili, tunc cum expeteretur a regibus populiſq; & illos nobilitante, quos dignata eſſet poſteris tradere. *Plin.* l. 35. c. 1.

† Quis abunde mirari poteſt, quod eminentiſſima cujuſq; profeſſionis ingenia in eandem formam & in idem arctati temporis * congruant ſpatium. *Peterc.* l. 1. c. 16.

* Sic Lipſius legit, pro *congruens*.

gene-

generals, had Greece at the ſame time? Had ever the world any ſo conſummate?

The Auguſtan age had the ſame fate in every reſpect. In that of Lewis XIV, what a number of great men lived of every kind, whoſe names, actions, and works, will celebrate that glorious reign for ever?

It ſeems as if there were certain periods of time, in which I know not what ſpirit of perfection univerſally diffuſes itſelf in the ſame country throughout all profeſſions, without it being poſſible to aſſign how or why it ſhould happen ſo. We may ſay, however that all arts and talents are allied in ſome manner to each other. The taſte of perfection is the ſame in whatever depends upon genius. If cultivation be wanting, an infinity of talents lie buried. When true taſte awakes, thoſe talents deriving mutual aid from each other, ſhine out in a peculiar manner. The misfortune is, that this perfection itſelf, when arrived at its ſupreme degree, is the forerunner of the decline of arts and ſciences, which are never nearer their ruin, than when they appear the moſt remote from it: Such are the inſtability and variation of all human things!

CHAP.

CHAPTER III.

OF ARCHITECTURE.

ARTICLE I.

Of Architecture in general.

SECT. I.

Rise, progress, and perfection of Architecture.

IT is not to be doubted but the care of building houses immediately succeeded that of cultivating lands, and that architecture is not of a much later date than agriculture. Hence Theodoret calls the latter the eldest sister of architecture. The excessive heats of summer, the severity of winter, the inconvenience of rain, and the violence of wind, soon instructed mankind to seek for shelter, and provide themselves a retreat to defend them against the inclemencies of weather. Theodor. orat. 4. de Provid. p. 359.

At first, these were only little huts, built very rudely with the branches of trees, and very indifferently covered. In the time of Vitruvius, they shewed at Athens, as curious remains of antiquity, the roofs of the Areopagus, made of clay; and at Rome in the temple of the capitol, the cottage of Romulus, thatched with straw. Vitr. l. 2. c. 1.

There were afterwards buildings of wood, which suggested the idea of columns and architraves. Those columns took their model from the trees which were used at first to support the roof, and the architrave is only the large beam, as its name implies,

implies, that was laid between the columns and the roof.

The workmen, in consequence of their application to building, became every day more industrious, and expert. Instead of those slight huts with which they contented themselves at first, they began to erect walls of stone and brick upon solid foundations, and to cover them with boards and tiles. In process of time, their reflections, founded upon experience, led them on to the knowledge of the just rules of proportion; the taste of which is natural to man, the author of his being having implanted in him the invariable principles of it, to make him sensible that he is born for order in all things. * Hence it is, as St. Austin observes, that in a building, where all the parts have a mutual relation to each other, and are ranged each in its proper place, the symmetry catches the eye, and occasions pleasure: whereas if the windows, for instance, are ill disposed, some large and others small, some placed higher and some lower, the irregularity offends the sight, and seems to do it a kind of injury, as St. Austin expresses it.

It was therefore by degrees, that architecture attained the height of perfection, to which the masters in the art have carried it. At first it confined itself to what was necessary to man in the uses of life, having nothing in view but solidity, healthfulness, and conveniency. An house should be durable, situated in an wholesome place, and have all the conveniencies that can be desired. Architecture afterwards laboured to adorn buildings, and make them more splendid, and for that reason called in other arts to its aid. At last came pomp, grandeur,

* Itaque in hoc ipso ædificio singula bene considerantes, non possumus non offendi, quod unum ostium videmus in latere, alterum prope in medio, nec tamen in medio collocatum. Quippe in rebus fabricatis, nulla cogente necessitate, iniqua dimensio partium facere ipsi adspectui velut quamdam videtur injuriam. *S. Augustin. de ord.* l. 2. c. 11. n. 34.

and

and magnificence, highly laudable on many occaſions, but ſoon ſtrangely abuſed by luxury.

The holy Scripture ſpeaks of a city built by Cain, after God had curſed him for the murder of his brother Abel; which is the firſt mentioned of edifices in hiſtory. From thence we learn the time and place in which architecture had its origin. The deſcendants of Cain, to whom the ſame Scripture aſcribes the invention of almoſt all the arts, carried this no doubt to a conſiderable height of perfection. And it is certain, that after the deluge, men, before they ſeparated from each other, and diſperſed themſelves into the different regions of the world, reſolved to ſignalize themſelves by a ſuperb building, which again drew down the wrath of God upon them. Aſia therefore was the cradle of architecture, where it had its birth, where it attained a great degree of perfection, and from whence it ſpread into the other parts of the univerſe. Gen. iv. 17.

Babylon and Nineveh, the vaſteſt and moſt magnificent cities mentioned in hiſtory, were built by Nimrod, Noah's great grandſon, and the moſt ancient of conquerors. I do not believe, that they were carried at firſt to that prodigious magnificence, which was afterwards the aſtoniſhment of the world; but certainly they were very great and extenſive from thenceforth, as the * names of ſeveral other cities, built in the ſame times after the model of the capital, teſtify. Gen. x. v. 11, 12.

The erection of the famous pyramids, of the lake Mœris, the labyrinth, of the conſiderable number of temples in Egypt, and of the obeliſks which are to this day the admiration and ornament of Rome, ſhew with what ardour and ſucceſs the Egyptians applied themſelves to architecture.

It is however neither to Aſia nor Egypt that this art is indebted for that degree of perfection, to

* Erech, *the long city*. Rehoboth, *the broad city*. Reſen, *the great city*. *According to the Hebrew.*

which

which it attained; and there is reaſon to doubt whether the buildings, ſo much boaſted by both, were as eſtimable for their juſtneſs and regularity, as their enormous magnitude; in which perhaps their principal merit conſiſted. The deſigns, which we have of the ruins of Perſepolis, prove that the kings of Perſia, of whoſe opulence ancient hiſtory ſays ſo much, had but indifferent artiſts in their pay.

However it be, it appears from the very names of the three principal orders of architecture, that the invention, if not perfection, of them is to be aſcribed to Greece, and that it was ſhe who preſcribed the rules, and ſupplied the models of them. As much may be ſaid with regard to all the other arts, and almoſt all the ſciences. Not to ſpeak in this place of the great captains, philoſophers of every ſect, poets, orators, geometricians, painters, ſculptors, architects, and, in general, of all that relates to the underſtanding, which Greece produced: whither we muſt ſtill go as to the ſchool of good taſte in every kind, if we deſire to excel.

It is a misfortune that there is nothing written by the Greeks upon architecture now extant. The only books we have of theirs upon this ſubject, are the ſtructures of thoſe ancient maſters ſtill ſubſiſting, whoſe beauty, univerſally acknowledged, has for almoſt two thouſand years been the admiration of all good judges: works infinitely ſuperior to all the precepts they could have left us; * practice in all things being infinitely preferable to theory.

For want of Greeks, Vitruvius, a Latin author, will come in to my aſſiſtance. His being architect to Julius and Auguſtus Cæſar (for according to the moſt received opinion he lived in their times) gives good reaſon to preſume upon the excellency of his work, and the merit of the author. And the

* In omnibus ferè minus valent præcepta, quam experimenta. *Quintil.*

Critics

Critics accordingly place him in the first class of the great geniusses of antiquity. To this first motive may be added the character of the age in which he lived, when good taste prevailed universally, and the emperor Augustus piqued himself upon adorning Rome with buildings equal to the grandeur and majesty of the empire; which made him say, * that he found the city of brick, but left almost entirely of marble. I had great occasion for so excellent a guide as Vitruvius, in a subject entirely new to me, I shall make great use of the notes Mr. Perrault has annexed to his translation of this author, as well as of Mr. Chambrai's reflections in his work intitled, *Ancient and modern architecture compared*, which I know is in high esteem with the judges; and those of Mr. Felibian, in his book, called, *Of the principles of architecture*, &c.

The antients, as well as we, had three sorts of architecture; the civil, the military, and the naval. The first lays down rules for all public and private buildings for the use of citizens in time of peace. The second treats of the fortification of places, and every thing of that kind relating to war: And the third the building of ships, and whatever is consequential of, or relates to it. I shall speak here only of the first, intending to say something elsewhere of the two others; and shall begin by giving a general idea of the several orders of building.

* Urbem, neque pro majestate imperii ornatam, & inundationibus incendiisque obnoxiam, excolunt adeò, ut jure sit gloriatus, marmoream se relinquere, quam lateritiam accepisset. *Sueton. in Aug.* c. 28.

SECT. II.

Of the three orders of architecture of the Greeks, and the two others, which have been added to them.

THE occaſion there was for erecting different ſorts of buildings made artiſts alſo eſtabliſh different proportions, in order to have ſuch as were proper for every kind of ſtructure, according to the magnitude, ſtrength, ſplendor and beauty, they were directed to give them: and from theſe different proportions they compoſed different orders.

Order, as a term of architecture, ſignifies the different ornaments, meaſures and proportions of the columns and pilaſters, which ſupport or adorn great buildings.

There are three orders of the architecture of the Greeks, the Doric, Ionic, and Corinthian. They may with reaſon be called the ſupreme perfection of the orders, as they contain not only all that is fine, but all that is neceſſary in the art; there being only three ways of building, the ſolid, the middle, and the delicate, which are all perfectly executed in theſe three orders.

To theſe the Latins have added two others, the Tuſcan and Compoſite orders, which are far below the former in value and excellency.

I. *Doric Order.*

The Doric order may be ſaid to have been the firſt regular idea of architecture, and as the eldeſt ſon of this art, had the honour to be alſo the firſt in building temples and palaces. The antiquity of its origin is almoſt immemorial: Vitruvius however aſcribes it with probability enough to a prince of Achaia, named Dorus, the ſame evidently who gave his name to the Dorians, and being ſovereign of

Vitr. l. 4. c. 1.

of Peloponnesus, caused a magnificent temple to be erected in the city of Argos to the goddess Juno. That temple was the first model of this order; in imitation of which, the neighbouring people built several others: the most famous of these was that consecrated by the inhabitants of the city of Olympia to Jupiter, surnamed the Olympic.

The essential character and specific quality of the Doric order is solidity. For this reason it ought principally to be used in great edifices and magnificent structures, as in the gates of citadels and cities, the outsides of temples, in public halls, and the like places, where delicacy of ornaments seems less consistent: whereas the bold and gigantic manner of this order has a wonderful happy effect, and carries a certain manly and simple beauty, which forms properly what is called the grand manner.

II. *Ionic Order.*

After the appearance of these regular buildings, and famous Doric temples, architecture did not confine itself long to these first essays: the emulation of the neighbouring people soon enlarged and carried it to its perfection. The Ionians were the first rivals of the Dorians; and as they had not the honour of the invention, they endeavoured to refine upon the authors. Considering, therefore, that the form of a man, such for example as Hercules was, from which the Doric order had been formed, was too robust and heavy to agree with sacred mansions and the representation of heavenly things, they composed one after their own manner, and chose a model of a more delicate and elegant proportion, which was that of a woman, having more regard to the beauty than solidity of the work, to which they added abundance of ornaments. Vitr. l. 4. c. 1.

Amongſt the celebrated temples built by the people of Ionia, the moſt memorable, though the moſt antient, is the famous temple of Diana at Epheſus, of which I ſhall ſoon ſpeak.

III. *Corinthian Order.*

The Corinthian order, which is the higheſt degree of perfection architecture ever attained, was invented at Corinth. Though its antiquity be not exactly known, nor the preciſe time in which Callimachus lived, to whom Vitruvius gives the whole glory of it, we may judge, however, from the nobleneſs of its ornaments, that it was invented during the magnificence and ſplendor of Corinth, and ſoon after the Ionic, which it much reſembles, except only in the capital or chapiter. A kind of chance gave birth to it. Callimachus having ſeen, as he paſſed by a tomb, a baſket, which ſome body had ſet upon a plant of Acanthus or bearsfoot, was ſtruck with the accidental ſymmetry and happy effect produced by the leaves of the plant, growing through and incircling the baſket; and though the baſket with the Acanthus had no natural relation to the capital of a column and a maſſy building, he imitated the manner of it in the columns he afterwards made at Corinth, eſtabliſhing and regulating by this model the proportions and ornaments of the Corinthian order.

Vitr. l. 4. c. 1.

This Callimachus was called by the Athenians κατατεχνος, *expert and excellent in art*, from his delicacy and addreſs in cutting marble: and according to Pliny and Pauſanias, he was alſo called καταζητεχνος, becauſe he was never contented with himſelf, and was always retouching his works, with which he was never entirely ſatisfied: full of ſuperior ideas of the beautiful and the grand, he never found the execution ſufficiently equal to them; *ſemper calumniator ſui, nec finem habens diligentiæ*, ſays Pliny.

Plin. l. 34. c. 9. Pauſan. l. 1. p. 48.

IV. *Tuſcan*

IV. *Tuſcan Order.*

The Tuſcan order, according to the general opinion, had its origin in Tuſcany, of which it retains the name. Of all the orders it is the moſt ſimple, and has the feweſt ornaments. It is even ſo groſs, that it is ſeldom uſed except for ſome ruſtic building, wherein there is occaſion only for a ſingle order; or at beſt for ſome great edifice, as an amphitheatre, or other the like works.

In Mr. Chambrai's judgment the Tuſcan column, without any architrave, is the only one that deſerves to be uſed; and to confirm his opinion of this order, he cites an example of it from Trajan's pillar, one of the moſt ſuperb remains of the Roman magnificence now in being, and which has more immortalized that emperor, than all the pens of hiſtorians could have done. This mauſolæum, if it may be called ſo, was erected to him by the ſenate and people of Rome, in acknowledgment of the great ſervices he had done to his country. And that the memory of them might ſubſiſt throughout all ages, and endure as long as the empire, they cauſed them to be engraven in marble, and in the richeſt ſtile that ever was conceived. Architecture was the writer of this ingenious kind of hiſtory: and becauſe ſhe was to record a Roman, ſhe did not make uſe of the Greek orders, though incomparably more perfect, and more uſed even in Italy than the two others of their own growth; leſt the glory of that admirable monument ſhould in ſome meaſure be divided, and to ſhew at the ſame time, that there is nothing ſo ſimple to which art cannot add perfection. She choſe therefore the column of the Tuſcan order, which till then had been only uſed in groſs and ruſtic things, and made their rude maſs bring forth the choiceſt and moſt noble maſter-piece of art in the world, which time has ſpared and pre-

ſerved entire down to us, amidſt the infinity of ruins, with which Rome abounds. And indeed it is a kind of wonder to ſee that the Coliſæum, the theatre of Marcellus, the great Circuſes, the baths of Diocleſian, Caracalla, and Antoninus, the ſuperb mole of Adrian's burying-place, the Septizonum of Severus, the Mauſolæum of Auguſtus, and ſo many other ſtructures, which ſeemed to be built for eternity, are now ſo defaced and ruinous, that their original form can ſcarce be diſcerned, whilſt Trajan's pillar, of which the ſtructure ſeems far leſs durable, ſtill ſubſiſts entire in all its parts.

V. *Compoſite Order.*

The Compoſite order was added to the others by the Romans. It participates and is compoſed of the Ionic and Corinthian, which occaſioned its being called the Compoſite: but it has ſtill more ornaments than the Corinthian. Vitruvius, the father of the architects, ſays nothing of it.

Mr. Chambrai objects ſtrongly againſt the bad taſte of the modern Compoſitors, who, amidſt ſo many examples of the incomparable architecture of the Greeks, which alone merits that name, abandoning the guidance of thoſe great maſters, take a quite different route, and blindly give into that bad taſte of art, which has by their means crept into the orders under the name of Compoſite.

Gothic architecture.

That which is remote from the antient proportions, and is loaded with chimerical ornaments, is called the Gothic architecture, and was brought by the Goths from the north.

There are two ſpecies of Gothic architecture; the one antient, the other modern. The antient is that which the Goths brought from the north in the

the fifth century. The edifices built in the antient Gothic manner were maſſy, heavy, and groſs. The works of the modern Gothic ſtile were more delicate, eaſy, light, and of an aſtoniſhing boldneſs of workmanſhip. It was long in uſe, eſpecially in Italy. It is ſurpriſing, that Italy, abounding with monuments of ſo exquiſite a taſte, ſhould quit its own noble architecture, eſtabliſhed by antiquity, ſucceſs, and poſſeſſion, to adopt a barbarous, foreign, confuſed, irregular, and hideous manner. But it has made amends for that fault, by being the firſt to return to the antient taſte, which is now ſolely and univerſally practiſed. The modern Gothic continued from the thirteenth century till the re-eſtabliſhment of the antient architecture in the fourteenth. All the antient cathedrals are of Gothic architecture. There are ſome very antient churches built entirely in the Gothic taſte, that want neither ſolidity nor beauty, and which are ſtill admired by the greateſt architects, upon account of ſome general proportions remarkable in them.

A plate of the five orders of architecture, of which I have ſpoken, will enable youth, whom I have always in view, to form ſome idea of them. I ſhall prefix to it an explanation of the terms of art, which Mr. Camus, fellow of the academy of ſciences, and profeſſor and ſecretary of the academy of architecture, was pleaſed to draw up expreſsly for my work. At my requeſt he abridged it very much, which makes it leſs compleat than it might otherwiſe have been.

SECT. III.

Explanation of the terms of art, relating to the five orders of architecture.

AMongſt the Greeks, an order was compoſed of columns and an entablature. The Romans added pedeſtals under the columns of moſt orders to increaſe their height.

The COLUMN is a round pillar, made either to ſupport or adorn a building.

Every column, except the Doric, to which the Romans give no baſe, is compoſed of a baſe, a ſhaft, and a capital or chapiter.

The BASE is that part of the column, which is beneath the ſhaft, and upon the pedeſtal, when there is any. It has a plinth, of a flat and ſquare form like a brick, called in Greek πλίνθος and mouldings, that repreſent rings, with which the bottoms of pillars were bound, to prevent their cleaving. Theſe rings, when large, are called *Tori*, and, when ſmall, *Aſtragals*. The Tori generally have hollow ſpaces cut round between them, called *Rundels*, *Scotia* or *Trochylus*.

The SHAFT of the column is the round and even part extending from the baſe to the capital. This part of the column is narrower at top than at bottom. Some architects are for giving the column a greater breadth at the third part of their height, than at the bottom of their ſhaft. But there is no inſtance of any ſuch practice amongſt the antients. Others make the ſhaft of the ſame ſize from the bottom to the third, and then leſſen it from the third to the top. And ſome are of opinion, that it ſhould begin to leſſen from the bottom.

The CAPITAL is that upper part of the column which is placed immediately upon the ſhaft.

The ENTABLATURE is the part of the order above

above the columns, and contains the architrave, the frize, and the corniſh.

The *Architrave* repreſents a beam, and lies next immediately to the capitals of the columns. The Greeks call it Epiſtyle, Ἐπιστύλιον.

The *Frize* is the ſpace between the architrave and the corniſh. It repreſents the cieling of the building.

The *Corniſh* is the beginning of the whole order. It is compoſed of ſeveral mouldings, which projecting over one another, ſerve to ſhelter the order from the waters of the roof.

The *Pedeſtal* is the loweſt part of the order. It is a ſquare body, containing three parts: The *foot*, which ſtands on the area or pavement; the *die*, that lies upon the foot; and the *wave* (cymatium) which is the corniſh of the pedeſtal, upon which the column is placed.

Architects do not agree among themſelves about the proportion of the columns to the entablature and pedeſtals. In following that of Vignola, when an order with pedeſtals is to be made to an height given, the height muſt be divided into nineteen equal parts, of which the column, with its baſe and capital, is to have twelve, the entablature three, and the pedeſtal four. But if the order is to have no pedeſtal, the height given muſt be divided into fifteen parts only, of which the column is to have twelve, and the entablature three.

It is by the diameter of the bottom of the ſhaft of the columns that all the parts of the orders are regulated. But this diameter has not the ſame proportion with the height of the column in all the orders.

The ſemidiameter of the bottom of the ſhaft is called *module* or *model*. This model ſerves as a ſcale to meaſure the ſmaller parts of the orders. Many architects divide it into thirty parts, ſo that the whole diameter contains ſixty, which may be called *minutes*.

The

The difference between the relation of the heights of columns to their diameters, and between their baſes, capitals, and entablatures, forms the difference between the five orders of architecture. But they are principally to be diſtinguiſhed by the capitals; except the Tuſcan, which might be confounded with the Doric, if only their capitals were conſidered.

The Doric and Ionic pillars have in their capitals only mouldings in the form of rings with a flat ſquare ſtone over them, called *Plinth* or *Abacus*. But the Doric is eaſily diſtinguiſhed from the Tuſcan order; the frize is plain, and in the Doric adorned with *Triglyphs*, which are long, ſquare ruſtics, not unlike the ends of ſeveral beams which project over the architrave to form a roof or cieling. This ornament is affected by the Doric order, and is not to be found in the others.

The Ionic capital is eaſily diſtinguiſhed by its volutes, ears, or ſpiral rolls, projecting underneath the plinth or abacus.

The Corinthian capital is adorned with two rows of eight leaves each, and with eight ſmall volutes, which project between the leaves.

And laſtly, the Compoſite capital is compounded from the Corinthian and Ionic capitals. It has two rows of eight leaves, and four great volutes, which ſeem to project under the abacus.

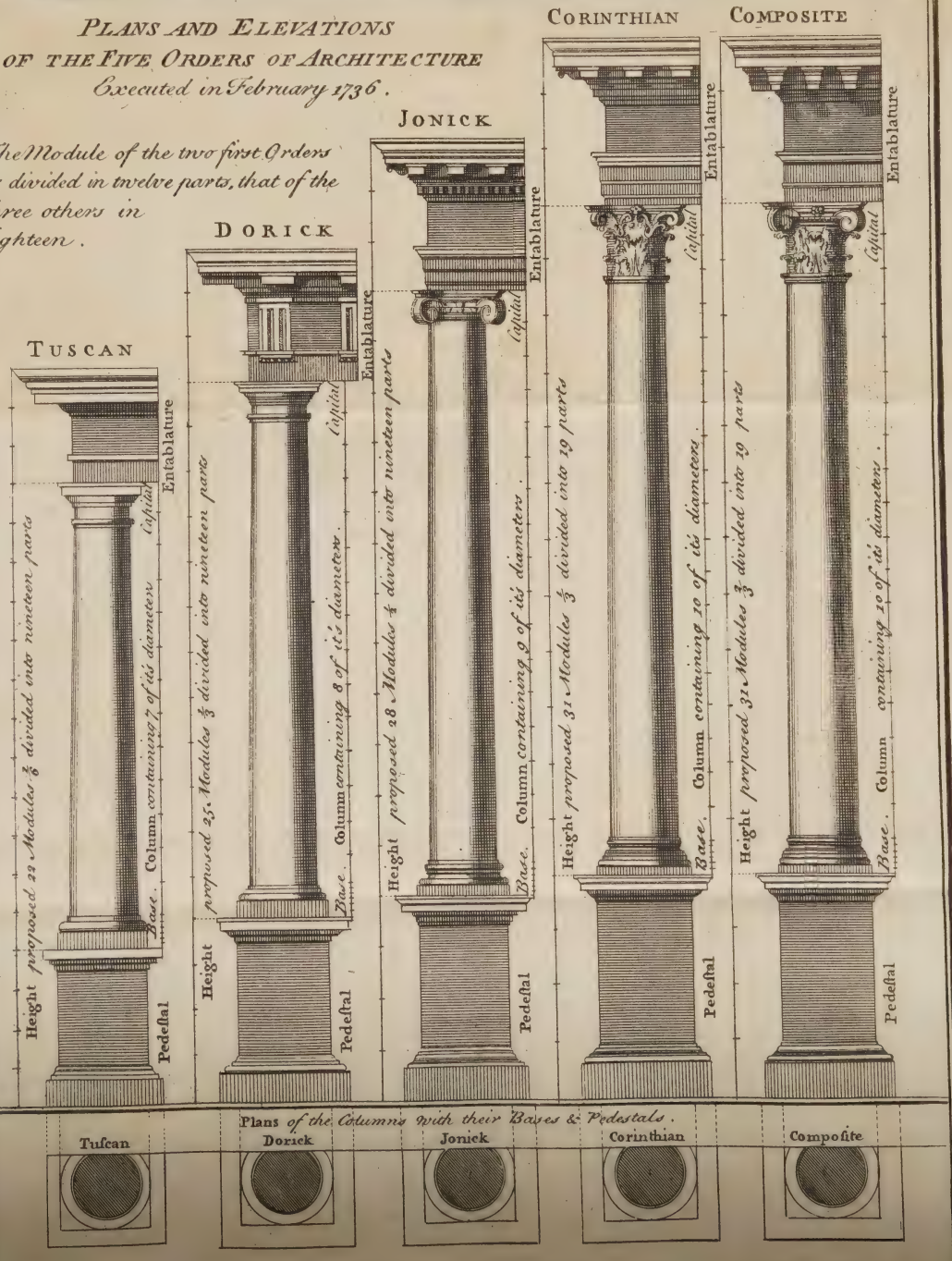
To relate at large all the particularities affected by the different orders, it would be neceſſary to expatiate upon particulars much more than is conſiſtent with the plan of my work.

Mr. Buache, Fellow of the academy of ſciences, has given himſelf the trouble to trace the plan of the five orders of architecture in the plate annexed.

PLANS AND ELEVATIONS OF THE FIVE ORDERS OF ARCHITECTURE

Executed in February 1736.

The Module of the two first Orders is divided in twelve parts, that of the three others in eighteen.



These Five Orders *of* Columns *or Pillars, used in Civil Architecture after the* Greeks *and* Romans, *who invented them, are executed according to the System of the Ancients & upon the same Scale of Modules, & rectified by the Proportions of 5 Orders, which adorn 5 Buildings of the King of France, & other Edifices composed & erected by different Modern Architects, & last of all by Mess.r Mansard.*

J. Basire Sculp.

ARTICLE II.

Of the architects and buildings most celebrated by the antients.

I Can only touch very lightly upon this subject, which would require whole volumes to treat it in its extent; and shall make choice of what seems most proper to inform the reader, and satisfy his just curiosity, without excluding what the Roman history may supply, as I have before observed.

The Holy Scripture, in speaking of the building of the tabernacle, and afterwards of the temple of Jerusalem that succeeded it, tells us one circumstance highly to the honour of architecture, which is, that God vouchsafed to be the first architect of those two great works, and traced the plans of them himself with his own divine hand, which he afterwards gave to Moses and David, to be the models for the workmen employed in them. This was not all. That the execution might fully answer his designs, *he filled Bezaleel with the Spirit of God*, whom he had appointed to preside in building the tabernacle; that is to say, in the express words of the Scripture, *he had filled him with the Spirit of God in wisdom, and in understanding, and in knowledge, and in all manner of workmanship. To devise cunning works, to work in gold, and in silver, and in brass. And in cutting of stones to set them, and in carving of timber, to work in all manner of workmanship.* And he joined Aholiab with him, *whom he had filled with wisdom as well as all the other* Artisans, *that they may make all that I have commanded thee.* It is said in like manner, that Hiram, who was employed by Solomon in building the temple, *was filled with wisdom, and understanding, and cunning, to work in all*

Exod. xxv. 8, 9. 1 Chron. xxviii. 19.

Exod. xxxi. 16.

1 Kings, vii. 14.

all works of braſs. The words I have now quoted, eſpecially thoſe from Exodus, ſhew that the knowledge, ſkill, and induſtry of the moſt excellent workmen are not their own, but the gift of God, of which they ſeldom know the origin, and make the uſe they ought. We muſt not expect to find ſuch purity of ſentiments amongſt the Pagans, of whom we have to ſpeak.

I ſhall paſs over in ſilence the famous buildings of Babylonia and Egypt, that I have mentioned more than once elſewhere, and in which brick was uſed with ſo much ſucceſs. I ſhall only inſert here a remark from Vitruvius, that has ſome relatioh to them.

Vitruv. l. 2. c. 8. This excellent architect obſerves, that the antients in their buildings made moſt uſe of brick, becauſe brick-work is far more durable than that of ſtone. Hence there were many cities, in which both the public and private buildings, and even the royal palaces, were only of brick. Amongſt many other examples, he cites that of Mauſolus, king of Caria. In the city of Halicarnaſſus, ſays he, the palace of the potent king Mauſolus is walled with brick, though univerſally adorned with the marble of Proconneſus; and thoſe walls are * ſtill very fine and entire, caſed over with a plaiſter as ſmooth as glaſs. It cannot however be ſaid, that this king could not build walls of more coſtly materials, who was ſo powerful, and at the ſame time had ſo great a taſte for fine architecture, as the ſuperb buildings, with which he adorned his capital, ſufficiently prove.

* *Vitruvius lived 350 years after Mauſolus.*

1. *Temple of Epheſus.*

The temple of Diana, of Epheſus, was deemed one of the ſeven wonders* of the world.

Cteſiphon or Cherſiphron (for authors differ in the name) made himſelf very famous by building this temple. He traced the plans of it, which were partly executed under his own direction, and that of his ſon Metagenes; and the reſt by other architects, who worked upon it after them, for the ſpace of two hundred and twenty years, which that ſuperb edifice took up in building. Cteſiphon worked before the LXth olympiad. Vitruvius ſays, that the form of this temple is *dipteric*, that is to ſay, that it was ſurrounded with two rows of columns in form of a double portico. It was almoſt one hundred and forty two yards in length, and ſeventy two in breadth. * In this edifice there were one hundred and twenty ſeven columns of marble ſixty feet high, given by as many kings. Thirty ſix of theſe columns were carved by the moſt excellent artiſts of their times. Scopas, one of the moſt celebrated ſculptors of Greece, finiſhed one of them, which was the fineſt ornament of this magnificent ſtructure. All Aſia had contributed with incredible ardour to the erecting and adorning it.

Plin. l. 36, c. 14.

A. M. 3464. Vitr. l. 3, c. 1.

Vitruvius relates the manner of getting the marble for this pile. Though the account ſeems a little fabulous, I ſhall, however, repeat it. A ſhepherd, named Pyxodorus, often drove his ſheep to feed in the country about Epheſus, at the time when the Epheſians propoſed to bring the marble that was neceſſary for building the temple of Diana, from Paros, Proconneſus, and other places. One day, whilſt he was with his flock, it happened, two

Vitr. l. 10, c. 7.

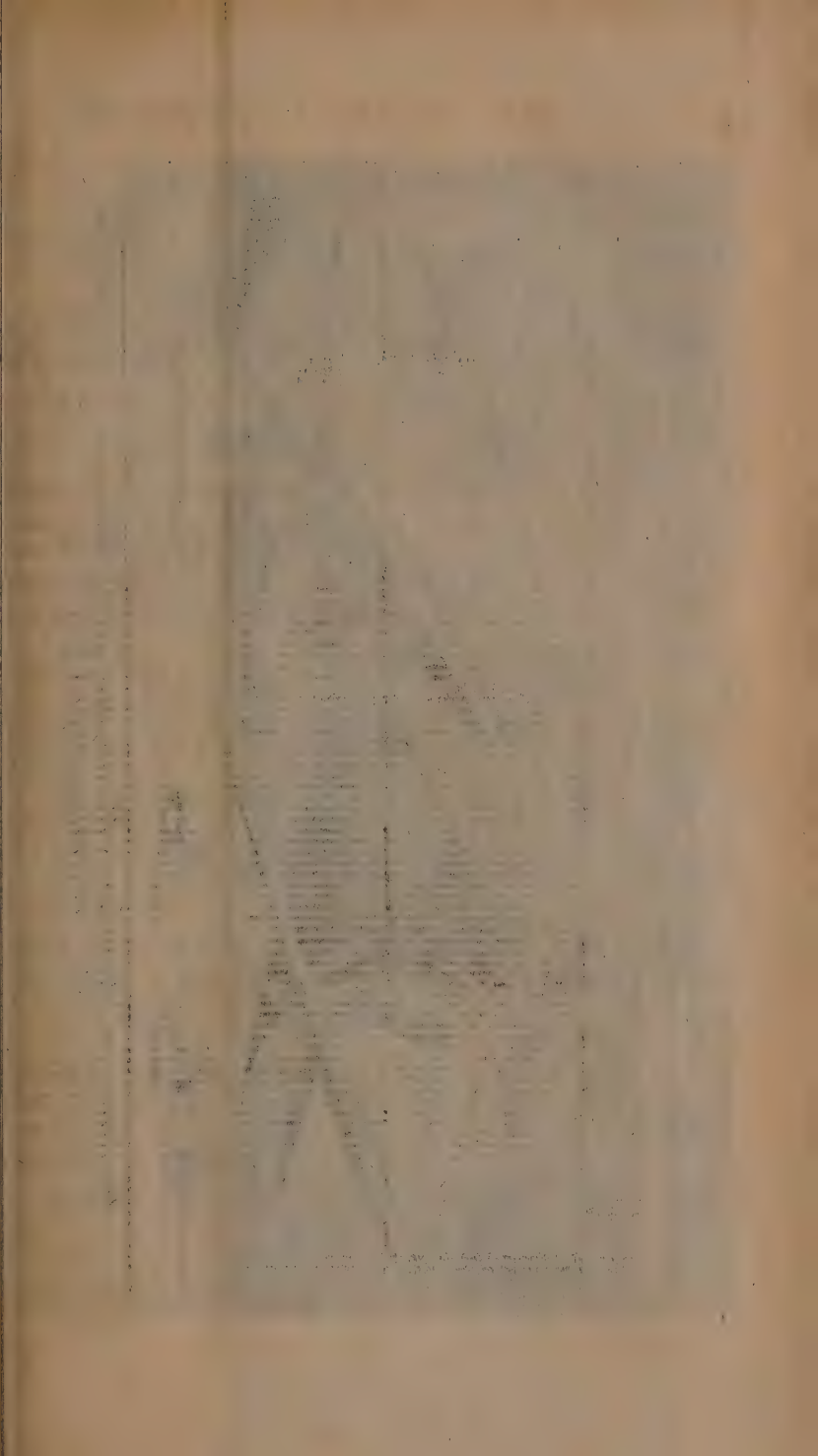
* *See plate and further deſcription of this temple, as the ſixth ſpecies of the temples of the antients, a little lower.*

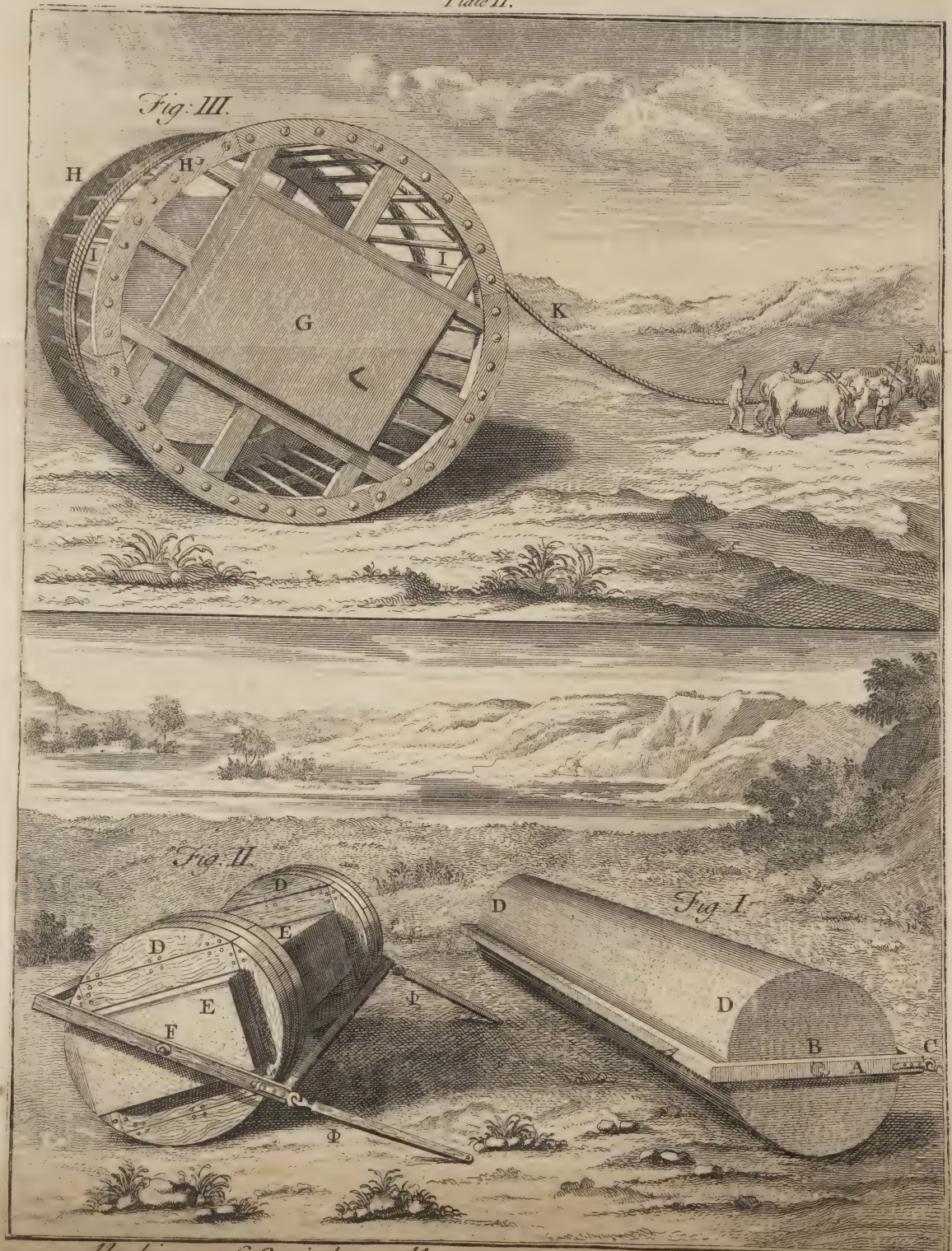
rams

rams that were fighting miſſed each other in their carier, and one of them hit his horn ſo violently againſt a rock, that he ſtruck off a piece of it, which ſeemed ſo exquiſitely white to the ſhepherd, that immediately leaving his flock upon the mountain, he ran with that ſplinter to Epheſus, at that time in great difficulty about the importation of marble. Great honours were inſtantly decreed him. His name Pyxodorus was changed into Evangelus, which ſignifies *the meſſenger of good news*; and to this day, adds Vitruvius, the magiſtrate of the city goes every month to ſacrifice upon the ſpot; and in caſe he fails to do ſo, is ſubject to a ſevere penalty.

Vitr. l. 10. c. 6. It was not ſufficient to have found marble; it was neceſſary to remove it into the temple, after being worked upon the ſpot, which could not be executed without difficulty and danger. Cteſiphon invented a machine, which very much facilitated the carriage of it. His ſon Metagenes invented another for carrying the architraves. Vitruvius has left us the deſcription of both theſe machines.

PLATE





Machines of Ctesiphon, Metagenes and Paconius for removing great Stones.

T. Bafire fculp.

PLATE II. explained.

The machines of Cteſiphon, Metagenes, and Paconius, for removing great ſtones.

CTESIPHON obſerving that the ways were not firm enough to bear the weight of vaſt columns, from the quarry to Epheſus, upon carriages, and that the wheels would ſink into the ground, and fruſtrate the endeavour of removing them in that manner, he contrived a frame, as in *Fig.* 1. of four pieces of wood, four inches ſquare; two of them, ſomething more than the length of the column AA, croſſed at the ends by the other two, ſomething more than its diameter. Vitr. l. 10. c. 6.

At each end of the column, in the center, he affixed a large iron pin, barbed at the ends within the ſtone, and well ſealed with lead; theſe came through iron rings in the croſs pieces of the frame, B.

To each corner of the frame, on the ſide the machine was to be drawn, poles of oak were joined, by iron hooks to ſtrong iron rings, C.

When the oxen drew at theſe poles, the columns DD turned round in the manner of a rolling-ſtone, and were drawn with no great difficulty to Epheſus; eight thouſand paces. Theſe pillars were only rough hewn at the quarry.

Fig. 2. Upon the model of the former machine, Metagenes, the ſon of Cteſiphon, contrived another for the carriage of architraves. He made ſtrong and broad wheels, of about twelve feet in diameter DD, in the middle of which he fixed the architraves EE with large iron pins in the center, at each end of them, F. The pins came through a ring of iron in a frame, like that of *Fig.* 1. to which poles for the beaſts to draw by were affixed in the ſame manner ΦΦ.

Fig.

Fig. 3. In the time of Vitruvius, Paconius undertook to bring from the mines the base, for a vast statue of Apollo, of twelve feet high, eight broad, and six thick. His machine, though not unlike that of Metagenes, was of a different make. It consisted of two strong wheels of fifteen feet high, H H. Into these he fixed the ends of the stone G. Through the whole circumference of both these wheels, at only a foot's distance from each other, he drove round spokes two inches thick, I I. Round these spokes the cable K was wound, which, when drawn by the oxen, set the machine a moving: but Vitruvius says, that the cable never drawing from any fixed or central point, the engine continually turned either to the right or left, in such a manner, that it could not be made to perform what it was designed for. Mr. Perrault expresses his surprise at this, as, says he, by adding only another cable, to draw equally on each side at the same time, it might have been made a better machine than that of Metagenes. He adds, that it was strange a man could have sense enough to invent such an engine, and not know so easy an expedient to rectify its operations.]

In præf. l. 7. The fame Vitruvius informs us, that Demetrius, whom he calls the servant of Diana, *servus Dianæ*, and Pæonius, the Ephesian, finished the building of this temple, which was of the Ionic order. He does not precisely mark the time when these two architects lived.

The frantic extravagance of a private man destroyed in one day the work of two hundred years. Every body knows that Herostratus, to immortalize his name, set fire to this famous temple, and consumed it to ashes. This happened on the day Alexander the Great was born; which suggested the frigid conceit to an historian, that Diana was so

ſo buſy at the labour of Olympia, that ſhe could not ſpare time to preſerve her temple.

The ſame Alexander, who was inſatiably fond of every kind of glory, offered afterwards to ſupply the Epheſians with all the expences neceſſary for the rebuilding of their temple, provided they would conſent, that he ſhould have the ſole honour of it, and that no other name ſhould be added to his in the inſcription upon it. The Epheſians did not approve this condition: but they covered their refuſal with a flattery, with which that prince ſeemed ſatisfied, in anſwering him, *That it was not conſiſtent for one god to erect a monument to another.* The temple was rebuilt with ſtill greater magnificence than the firſt.

2. *Buildings erected at Athens, eſpecially under Pericles.*

I ſhould never have done, if I undertook to deſcribe all the famous buildings with which the city of Athens was adorned. I ſhall place the Piræum at the head of the reſt, becauſe that port contributed moſt to the grandeur and power of Athens. Before Themiſtocles, it was a ſimple hamlet, the Athenians, at that time, having no port but Phalerus, which was very ſmall and incommodious. Themiſtocles, whoſe deſign was to make the whole force of Athens maritime, rightly obſerved, that, to accompliſh a deſign truly worthy of ſo great a man, it was neceſſary to provide a ſecure retreat for a very conſiderable number of ſhips. He caſt his eyes upon the Piræum, which, by its natural ſituation, afforded three different ports within the ſame incloſure. He immediately cauſed it to be worked upon with the utmoſt diſpatch, took care to fortify it well, and ſoon put it into a condition to receive numerous fleets. This port was about two leagues (forty ſtadia) from the city; an ad-

Cor. Nep. in Themiſt. c. 6. Plut. in Themiſt. p. 121. Thucyd. l. 1. p. 62. Pauſan. l. 1. p. 1. &c.

vantageous situation, as Plutarch observes, for removing from the city the licentiousness which generally prevails in ports. The city might be supported by the Piræum, and the Piræum by the city, without prejudice to the good order it was necessary to observe in the city. Pausanias mentions a great number of temples, which adorned this part of Athens, that in a manner formed a second city distinct from the first.

Pericles joined these two parts by the famous wall, that extended two leagues, and was the beauty and security of both the Piræum and the city: it was called *the long wall.* Demetrius Phaleræus, whilst he governed Athens, applied himself particularly in fortifying and embellishing the Piræum. The arsenal, built at that time, was looked upon as one of the finest pieces of work Greece ever had. Demetrius gave the direction of it to Philo, one of the most famous architects of his time. He discharged that commission with all the success which could be expected from a man of his reputation. * When he gave an account of his conduct in the public assembly, he expressed himself with so much elegance, perspicuity, and precision, that the people of Athens, excellent judges in point of eloquence, conceived him as fine an orator as he was an architect, and admired no less his talent for speaking than his ability for building. The same philosopher was charged with the alterations it was thought proper to make in the magnificent temple of Ceres and Proserpine at Eleusis, of which I shall soon speak.

Cic. l. 1. de orat. n. 62.

Vitr. l. 7. in præfat.

To return to Pericles, it was under his equally long and glorious government, that Athens, in-

Plut. in Pericl. p. 158.

* Gloriantur Athenæ armamentario suo, nec sine causa: est enim illud opus & impensa & elegantia visendum. Cujus architectum Philonem ita facundè rationem institutionis suæ in theatro reddidisse constat, ut disertissimus populus non minorem laudem eloquentiæ ejus, quam arti tribuerit. *Val. Max.* l. 8. c. 12.

riched

riched with temples, porticoes, and ſtatues, became the admiration of all the neighbouring ſtates, and rendered herſelf almoſt as illuſtrious by the magnificence of her buildings, as ſhe was for the glory of her military exploits. Pericles, finding her the depoſitary and diſpenſer of the public treaſures of Greece, that is to ſay, of the contributions paid by the ſeveral ſtates, for the ſupport of troops and fleets, believed, after having ſufficiently provided for the ſecurity of the country, that he could not employ the ſums that remained to better purpoſe, than to adorn and improve a city, that was the honour and great defence of all the reſt.

I do not examine here whether he were in the right or not; for this conduct was imputed to him as a crime; nor whether this uſe of the public money was conformable to the intention of thoſe who ſupplied it: I have ſaid elſewhere what we ought to think of it; and content myſelf with obſerving, that a ſingle man inſpired the Athenians with a taſte for all the arts; that he ſet all the able hands at work, and raiſed ſo lively an emulation amongſt the moſt excellent workmen in every kind, that, ſolely intent upon immortalizing their names, they uſed their utmoſt endeavours, in all the works confided to their care, to ſurmount each other, and ſurpaſs the magnificence of the deſign by the beauty and ſpirit of the execution. One would have believed, that there was not one of thoſe buildings but muſt have required a great number of years, and a long ſucceſſion of men, to compleat it: and yet, to the aſtoniſhment of every body, they had been all carried to ſo ſupreme a degree of perfection during the government of one man; and that too in no conſiderable number of years, conſidering the difficulty and excellency of workmanſhip.

Another conſideration, which I have already touched upon elſewhere, ſtill infinitely exalts their

value: I only copy Plutarch in this place, and ſhould be very glad if I could come near the energy and vivacity of his expreſſions. Facility and expedition do nor generally communicate ſolid and laſting graces, nor perfect beauty to works: but time, united with labour, pays delay with uſury, and gives the ſame works a force capable of preſerving, and of making them triumph, through all ages. This renders the works of Pericles the more admirable, which were finiſhed in ſo ſhort a time, and yet had ſo long a duration. For, from the moment they came from the workman's hands, they had the beauty and ſpirit of antiques; and even now, ſays Plutarch, that is to ſay, about ſix hundred years after, they have the freſhneſs of youth, as if but lately finiſhed; ſo much do they ſtill retain a bloom of grace and novelty, that prevents time itſelf from diminiſhing their beauty, as if they poſſeſſed within themſelves a principle of immortal youth, and an animating ſpirit incapable of growing old.

Plutarch afterwards mentions ſeveral temples and ſuperb edifices, in which the moſt excellent artiſts had been employed. Pericles had choſen Phidias to preſide in erecting theſe ſtructures. He was the moſt famous architect, and, at the ſame time, the moſt excellent ſculptor and ſtatuary of his times. I ſhall ſpeak of him preſently, when I come to treat of the article of ſculpture.

3. *The Mauſolæum.*

The ſuperb monument which Artemiſia erected for her huſband Mauſolus, king of Caria, was one of the moſt famous buildings of antiquity, as it was thought worthy of being ranked amongſt the ſeven wonders of the world. I ſhall cite, in the following article upon ſculpture, what Pliny ſays of it.

4. *City*

4. *City and light-houſe of Alexandria.*

It is natural to expect, that whatever derives itſelf from Alexander, muſt have ſomething great, noble, and majeſtic in it; which are the characters of the city he cauſed to be built, and called after his name in Egypt. He charged Dinocrates with the direction of this important undertaking. The hiſtory of that architect is very ſingular.

He was a Macedonian. Confiding in his genius and great ideas, he ſet out for the army of Alexander, with deſign to make himſelf known to that prince, and to propoſe views to him as he conceived would ſuit his taſte. He got letters of recommendation from his relations and friends to the great officers and leading men at the court, in order to obtain a more eaſy acceſs to the king. He was very well received by thoſe to whom he applied, who promiſed to introduce him as ſoon as poſſible to Alexander. As they deferred doing it from day to day, under pretence of wanting a favourable opportunity, he took their delays to imply evaſion, and reſolved to preſent himſelf. His ſtature was advantageous, his viſage agreeable, and his addreſs ſpoke a perſon of condition. Relying therefore upon his good mien, he ſtripped himſelf of his uſual habit, anointed his whole body with oil, crowned himſelf with a wreath of poplar, and throwing a lion's ſkin over his ſhoulders, took a club in his hand, and in that equipage approached the throne, upon which the king ſat diſpenſing juſtice. The novelty of his ſight having opened his way through the crowd, he was perceived by Alexander, who, ſurpriſed at his appearance, ordered him to approach, and aſked him who he was. He replied, "I am Dinocrates the Macedonian, "an architect, who bring thoughts and deſigns to

Vitr. in præfat. l. 2.

" Alexander worthy his greatneſs." The king gave him the hearing. He told him, that he had formed a deſign of cutting mount Athos into the form of a man, that ſhould hold a great city in his left hand, and in his right a cup to receive all the rivers, which ran from that mountain, and to pour them into the ſea. Alexander, reliſhing this gigantic deſign, aſked him whether there were lands enough about this city to ſupply corn for its ſubſiſtence? And having been anſwered, that it would be neceſſary to bring that by ſea, he told him that he applauded the boldneſs of his deſign, but could not approve the choice of the place he had pitched upon for the execution of it. He however retained him near his perſon, adding, that he would employ his ability in other undertakings.

Alexander accordingly, in the voyage he made into Egypt, having diſcovered a port there, that was very well ſheltered and of eaſy acceſs, ſurrounded by a fertile country, and abounding with conveniencies on account of its neighbourhood to the Nile, he commanded Dinocrates to build a city adjoining to it, which was called Alexandria, after his name. The architect's ſkill and the prince's magnificence vied with each other in embelliſhing it, and ſeemed to exceed themſelves in order to render it one of the greateſt and moſt ſuperb cities of the world. It was incloſed within a vaſt extent of walls, and fortified with towers. It had a port, aqueducts, fountains, and canals of great beauty; an almoſt infinite number of houſes for the inhabitants, ſquares, lofty edifices, public places for the celebration of games and ſhews; in a word, temples and palaces ſo ſpacious, and in ſo great a number, that they took up almoſt a third part of the whole city. I have obſerved elſewhere in what manner Alexandria became the center of the commerce of the eaſt and weſt.

Strab. l. 17. p. 791, &c.

A con-

Vol. I. Pag. 25. Rollin's Hist.

A View of the City & Port of Alexandria & Isle of Pharos.

W.K. Toms sculp.

A. The City B. The Kings Palace C. The Theatre adjoining to it D. The Island of Pharos E. The narrow way that joyns it to the Town F. The Lighthouse G. The Port

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A conſiderable ſtructure, afterwards erected in the neighbourhood of this city, ſtill rendered it more famous; I mean the light-houſe of the iſland of Pharos. Sea-ports were uſually fortified with towers, as well for their defence, as to guide thoſe who ſailed in the night, by the means of fires kindled upon them. Theſe towers were at firſt of a very ſimple ſpecies: but Ptolomæus Philadelphus cauſed one ſo great and magnificent to be erected in the iſland of Pharos, that ſome have ranked it amongſt the wonders of the world: it coſt eight hundred talents, that is to ſay, one million eight hundred thouſand livres.

The iſle of Pharos was about ſeven ſtadia, or ſomething more than a quarter of a league, from the continent. It had a pomontory or rock againſt which the waves of the ſea broke. It was upon this rock Ptolomæus Philadelphus built the tower of Pharos of white ſtone, of ſurpriſing magnificence, with ſeveral arched ſtories not unlike the tower of Babylon, which had eight ſuch ſtories. He gave the direction of this work to a celebrated architect called Soſtratus, who cut this inſcription upon the tower: *Soſtratus of Cnidos, ſon of Dexiphanes, to the gods preſervers, in favour of thoſe who go by ſea.* In the hiſtory of Philadelphus, the reader may ſee what has been ſaid upon this inſcription. Strab. ibid. Plin. l. 36. c. 12.

An author, who lived about ſix hundred years ago, ſpeaks of the tower of Pharos, as of an edifice ſubſiſting in his time. The height of the tower, according to him, was three hundred cubits, that is to ſay, four hundred and fifty feet, or an hundred and fifty yards. A manuſcript ſcholiaſt upon Lucian, cited by Iſaac Voſſius, affirms, that for its ſize it might be compared with the pyramids of Egypt; that it was ſquare, that its ſides were almoſt a ſtadium, near two hundred and eight yards; that its top might be deſcried an hundred miles, or about thirty or forty leagues. *The Nubian Geographer.* Is. Voſſ. ad Pomp. Mel. p. 205.

This tower ſoon took the name of the iſland, and was called Pharos; which name was afterwards given to other towers erected for the ſame uſe. The iſle on which it was built became a peninſula in proceſs of time. Queen Cleopatra joined it to the main land by a mole, and a bridge from the mole to the iſland: a conſiderable work, in which Dexiphanes, a native of the iſle of Cyprus, preſided. She gave him by way of reward a conſiderable office in her court, and the direction of all the buildings ſhe afterwards cauſed to be erected.

Tzetzes Chil. 2. hiſt. 33.

We find from more than one example, that expert architects were very much honoured and eſteemed amongſt the antients. The inhabitants of Rhodes had ſettled a conſiderable penſion upon Diognetus, one of their citizens, to reward him for the machines of war which he had made for them. It happened that a foreign architect, who called himſelf Callias, had made a model in little, of a machine capable, as he pretended, of lifting and removing any weight whatſoever, and thereby excelling all other machines. Diognetus, judging the thing abſolutely impoſſible, was not aſhamed to confeſs that it ſurpaſſed his ſkill. The penſion of the latter was transferred to Callias, as far the more expert artiſt. When Demetrius Poliorcetes was preparing to make his terrible *Helepolis* approach the walls of Rhodes, which he beſieged, the inhabitants called upon Callias to make uſe of his machine. He declared it to be too weak to remove ſo great a weight. The Rhodians then perceived the enormous fault they had commmitted, in treating a citizen to whom they had ſuch great obligations with ſo much ingratitude. They beſeeched Diognetus in the moſt earneſt manner to aſſiſt his country, expoſed to the utmoſt danger. He refuſed at firſt, and remained for ſome time inflexible to their intreaties. But when he ſaw the prieſts, and the moſt noble children of

Vitr. l. 10. c. 33.

of the city, bathed in their tears, come to implore his aid, he complied at laſt, and could not withſtand ſo moving a ſpectacle. The queſtion was to prevent the enemy's approaching their formidable machine to the wall. He effected it without much difficulty, having laid the land under water, over which the Helepolis was to paſs, which rendered it abſolutely uſeleſs, and obliged Demetrius to raiſe the ſiege, by an accommodation with the Rhodians. Diognetus was loaded with honours, and double his former penſion ſettled upon him.

5. *The four principal temples of Greece.*

Vitruvius ſays, that there were amongſt others four temples in Greece, entirely built of marble, and adorned with ſuch exquiſite ornaments, that they were the admiration of all good judges, and became the rule and model of buildings in the three orders of architecture. The firſt of theſe ſtructures is the temple of Diana at Epheſus. The ſecond that of Apollo in the city of Miletus: Both theſe were of the Ionic order. The third is the temple of Ceres and Proſerpine at Eleuſis, which Ictinus built in the Doric order, of extraordinary dimenſions, capable of containing thirty thouſand perſons: for there were as many, and often more, at the celebrated proceſſion of the feaſt of Eleuſis. This temple at firſt had no columns without, in order to leave the more room for the ſacrifices. But Philo afterwards, when Demetrius Phaleræus governed Athens, placed ſome pillars in the front, to render the edifice more majeſtic. The fourth is the temple of Jupiter Olympius at Athens, of the Corinthian order. Piſiſtratus had begun it, but it remained unfiniſhed after his death, upon account of the troubles in which the republic was involved. More than three hundred years after, Antiochus Epiphanes,

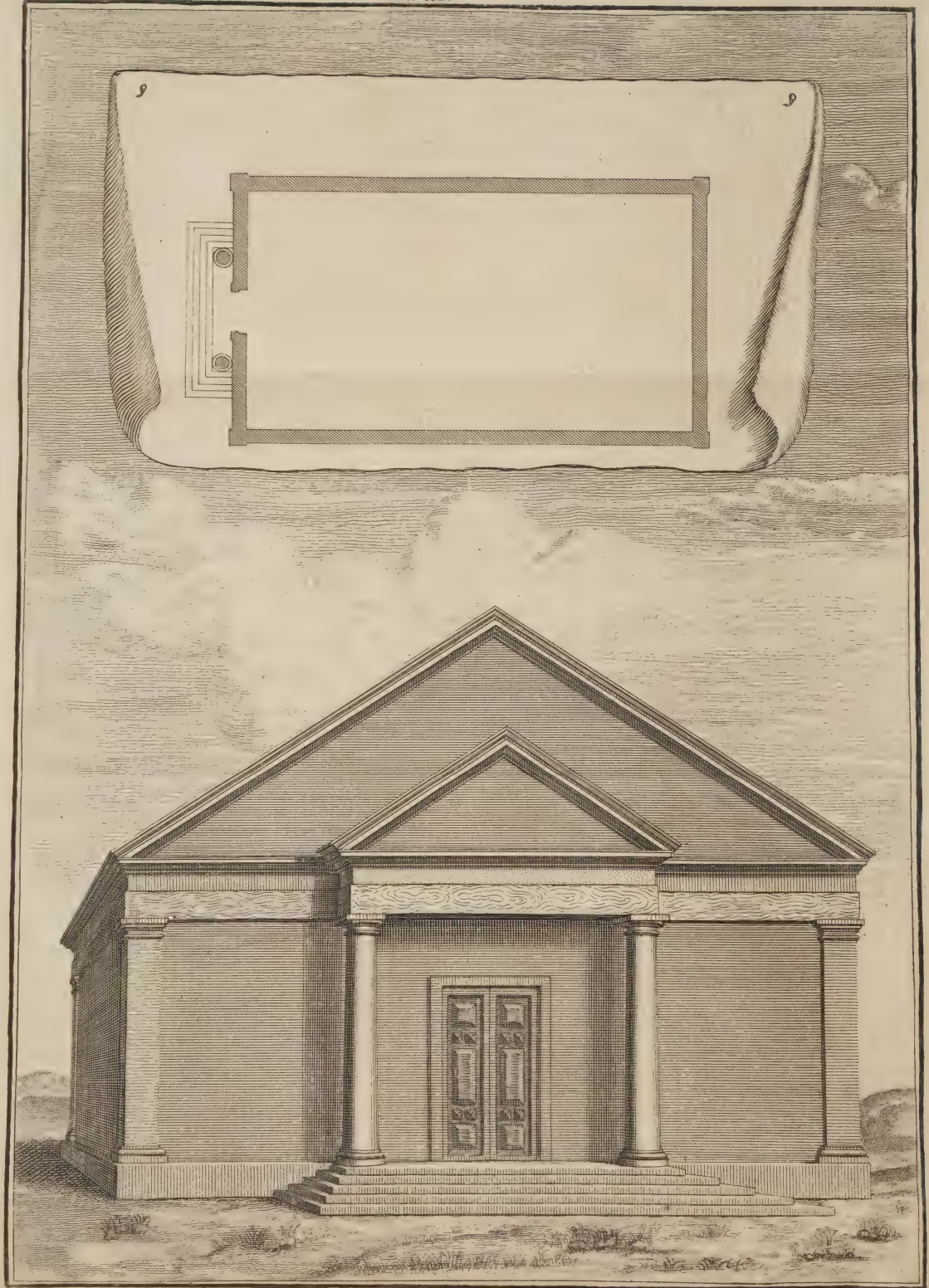
Vitruv. in præf. l. 7.

Her. l. 3. c. 65. Strab. l. 9. p. 395.

Vitr. ibid.

Liv. l. 41. n. 20. Epiphanes, king of Syria, took upon him to defray the expences that were neceſſary for finiſhing the body of the temple, which was very large, and the columns of the portico. Coſſutius, a Roman citizen, who had made himſelf famous amongſt the architects, was choſen to execute this great work. He acquired great honour by it, this pile being eſteemed to have very few equal to it in magnificence. The ſame Coſſutius was one of the firſt amongſt the Romans who built in the Grecian taſte. He gives me occaſion to ſpeak of ſeveral edifices at Rome, which often employed Greek architects, and thereby in ſome meaſure to reſume my plan.

In



I. Temple of Fortune near the Porta Collina at Rome. J. Basire sculp.

[In order to render this article upon architecture the more useful and entertaining, it was thought proper to add here the following plates of the seven different kinds of ancient temples, with a brief description of each of them. The reader may observe that all the different orders of architecture are introduced in them.]

TEMPLE I. Plate 3.

Of Fortune.

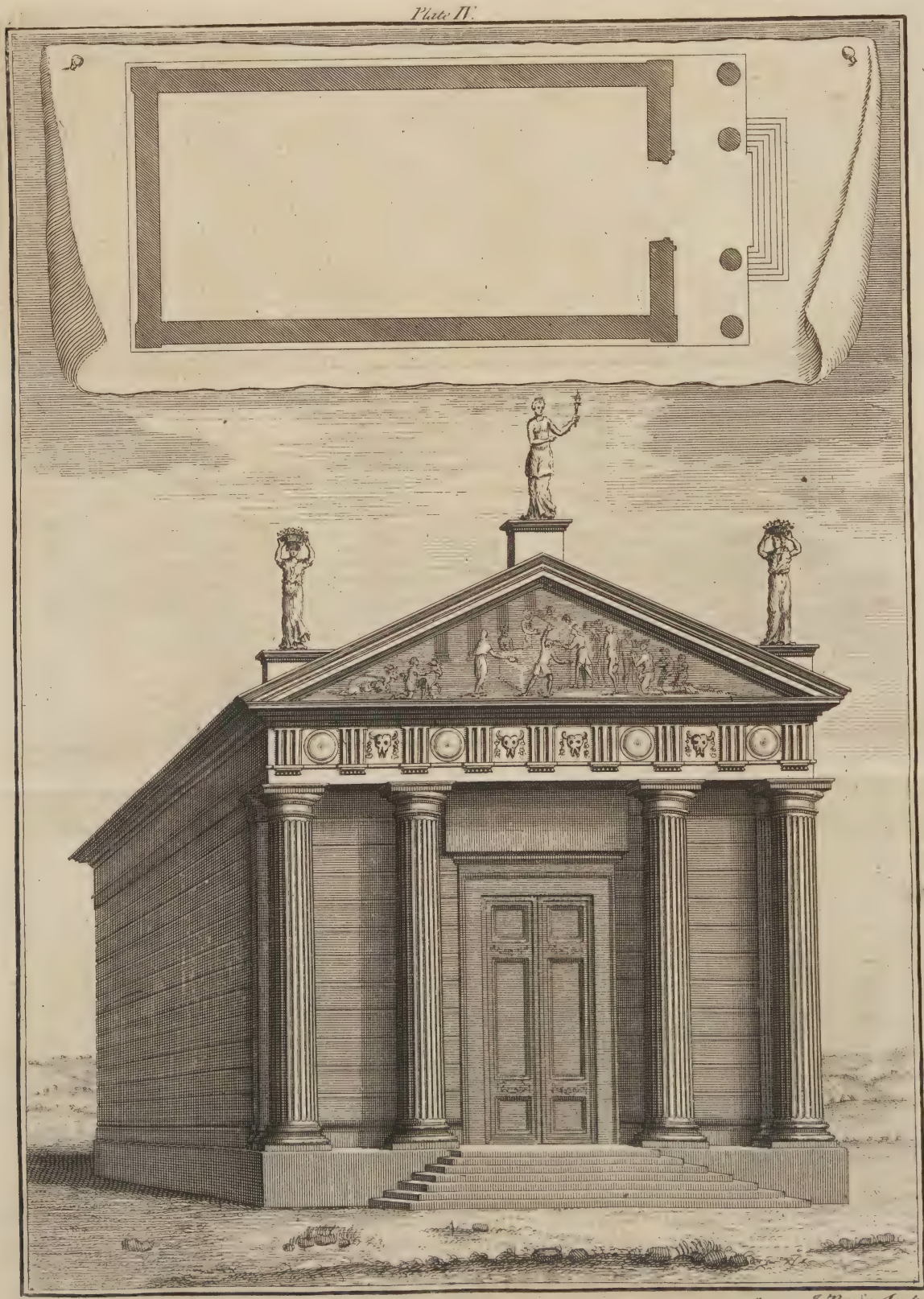
THIS kind of temples were called *Antæ* or *Paraſtatæ*, becauſe they had no pillars at their angles, but only pilaſters, which the ancients called Antæ or Paraſtatæ. The examples Vitruvius gives of them are three temples of Fortune at Rome, eſpecially that near the Porta Collina. As he does not deſcribe it particularly, Mr. Perrault thought proper to make it of the Tuſcan order, which ſuits the moſt ſimple of all temples, and an *Aræſtyle*, that is to ſay, one having few pillars. There was a neceſſity for giving it a double pediment upon account of its having two different coverings, that of the temple, and that of the portico, ſupported by the two Tuſcan pillars. The height of thoſe pediments, according to Vitruvius, was conſiderable.

TEMPLE

TEMPLE II. Plate 4.

Of Ceres and Proſerpine at Eleuſis.

THIS ſecond ſpecies of temple was called *Proſtylos*, from having pillars only in front. It is called alſo *Tetraſtylos*, that is to ſay, having four pillars in front. The example of this is the temple of Ceres Eleuſina, mentioned above as one of the four principal temples of Greece. It was begun by Ictinus, and finiſhed by Philo, who made it a Proſtyle or Tetraſtyle, by adding columns to its front. The baſſo relievo in the pannel of its pediment repreſents a piece of hiſtory related by Pauſanias, who ſays, that, near the temple of Ceres Eleuſina, were two large ſtones, that lay upon one another, from between which the prieſts went annually in proceſſion to take a writing, that contained the ceremonies to be obſerved in the ſacrifices during the reſt of the year. And becauſe the ancients uſed to repreſent upon the pediments of their temples the particular manner in which the ſacrifices were performed in them, and the ſacrifices of this temple, which changed every year, could not be repreſented, it was thought proper to put this piece of hiſtory upon the front of it, as it ſhews one of the principal circumſtances relating to theſe ceremonies; which was to take the writing, that preſcribed the order to be obſerved in the ſacrifices during the year, from betwixt the ſtones.



II. Temple of Ceres & Proserpine at Eleusis.

J. Basire Sculp.

III. Temple of Concord at Rome. J. Basire sculp.

TEMPLE III. Plate 5.

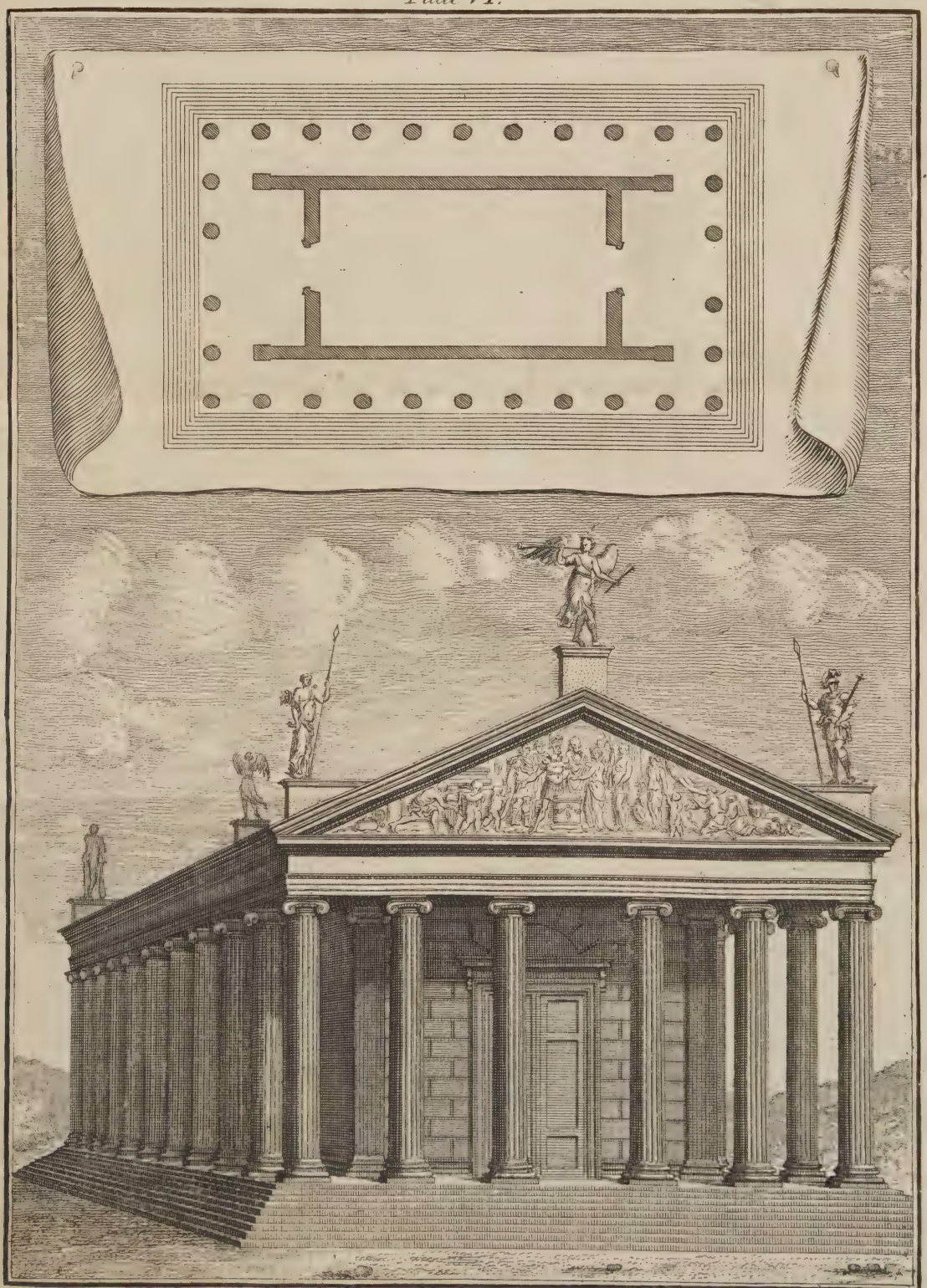
Of Concord at Rome.

THIS kind of temple is called *Amphiproſtylos*, that is, a double Proſtyle, having pillars both before and behind it. It is alſo a Tetraſtyle, as well as a Proſtyle. This example is of the Compoſite order, for the ſake of diverſifying the plates; and is taken from the ruins of the temple of Concord ſtill to be ſeen at Rome. It is called Compoſite, from being compoſed of the Ionic and Corinthian orders, having the volutes and eggs of the former, and the plinth of the latter.

TEMPLE IV. Plate 6.

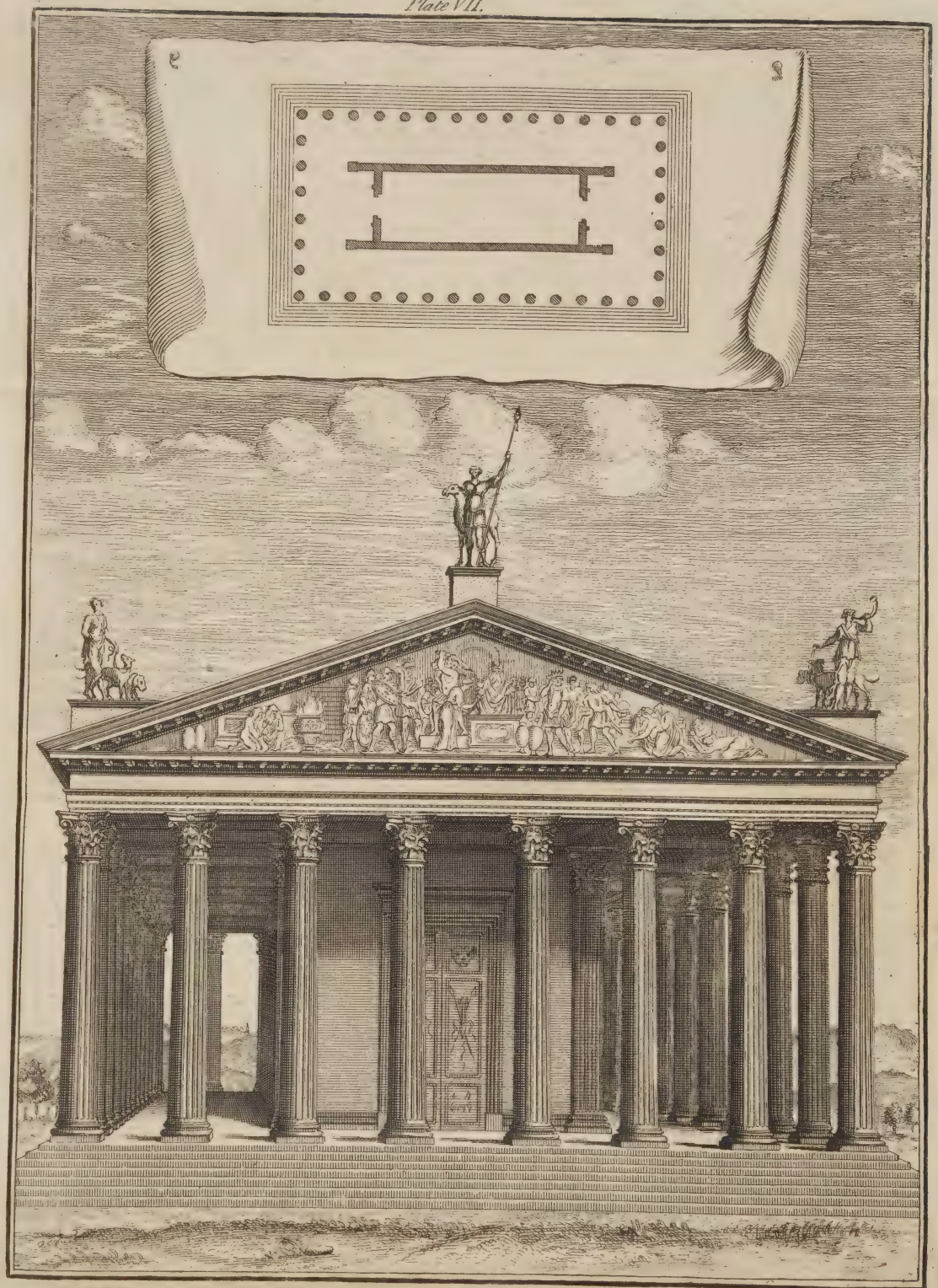
Of virtue and honour at Rome.

THIS fourth kind of temple is called *Peripteral*, from having pillars all around it. It is an *Hexaſtyle*, that is, having ſix pillars in front: it has eleven on each ſide, including thoſe at the corners. The example Vitruvius gives of it is the temple of virtue and honour built by Marius, and adorned with a portico all around it by Mutius the architect. St. Auguſtin mentions this temple, and tells us, that the fore-part of it was dedicated to virtue, and the back-part to honour, in order to eſtabliſh a refined morality; to which Vitruvius adds a circumſtance, omitted by that Saint, that makes for the ſame effect: *viz.* that this temple had no *poſticum*, or back-door, as moſt others had: which intimates, that it is not only neceſſary to paſs through virtue to arrive at honour, but that honour obliges her votaries to return alſo through virtue, that is to ſay, to perſevere and improve in it. In the plan there is a back-door deſigned, conformably to what Vitruvius lays down as eſſential to this kind of temples. The elevation is of the Ionic order, that all the orders might be here repreſented (as is ſaid before) with all the different kinds of temples.



IV. Temple of Virtue & Honour at Rome.

J. Basire Sculp.



V. Temple of Diana in the City of Magnesia.

N. Basire Sculp.

TEMPLE V. Plate 7.

Of Diana in the city of Magneſia.

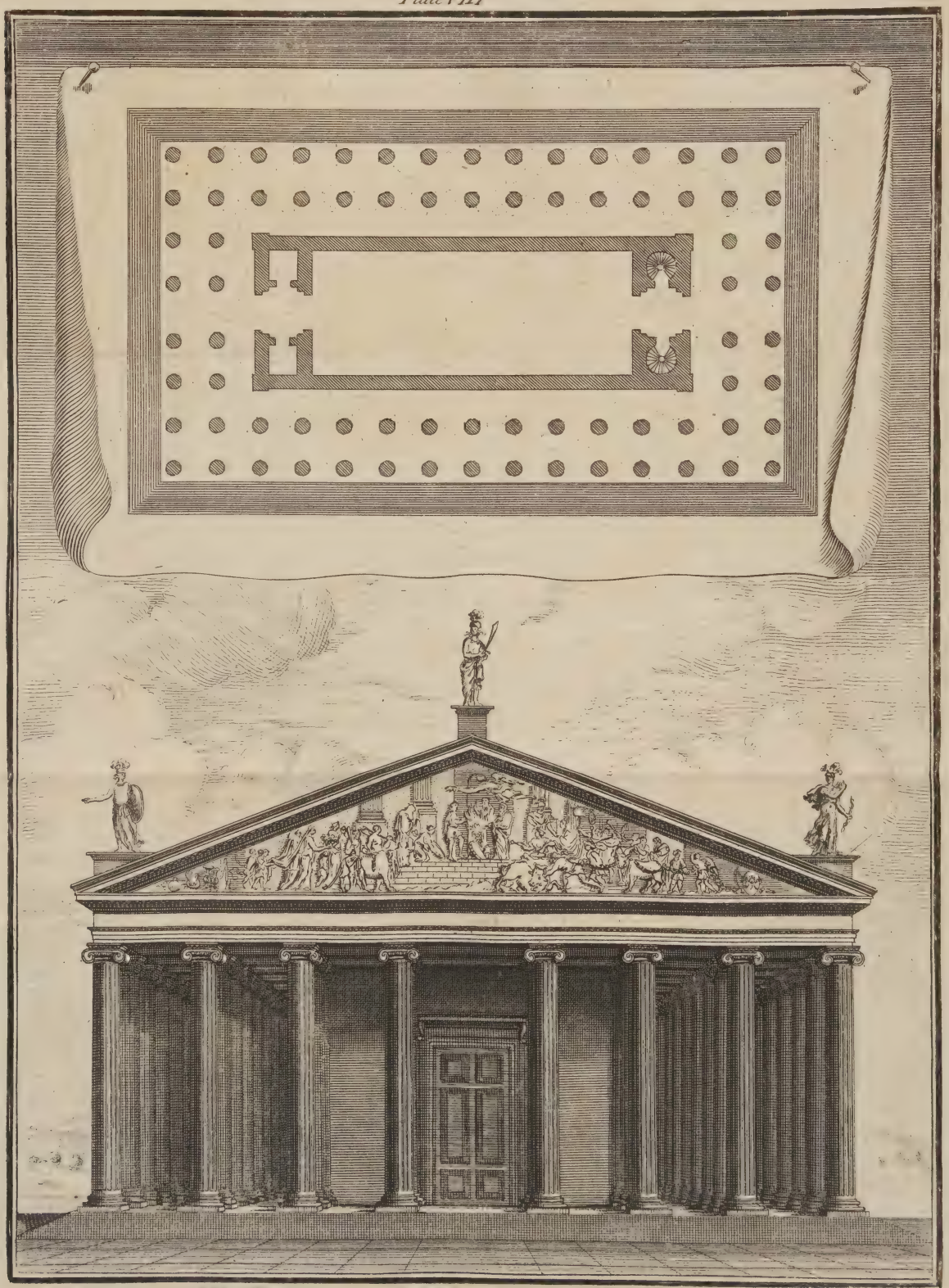
THIS fifth kind of temple is called *Pſeudodiptera*, that is, falſe or imperfect Diptera, becauſe it had not the double rows of pillars which the Diptera had. It is an *Octoſtyle*, that is, having eight pillars in front; and a *Syſtyle*, or having its pillars cloſe, there being only two diameters of a pillar between each of them. It has fifteen pillars on the ſides, including thoſe at the corners. Vitruvius ſays, there were no examples of this kind of temple at Rome, wherefore he cites that of Diana at Magneſia, built by Hermogenes Alabandinus, the firſt and moſt celebrated architect of antiquity, who was the inventor of this kind of temple. The ſpace between the walls and the pillars was two intercolumniations, and the breadth of the baſe of a pillar, or five diameters of a pillar. There was alſo a temple of Apollo of this kind at Magneſia, built by Mneſtes.

TEMPLE VI. Plate 8.

Of Diana at Epheſus.

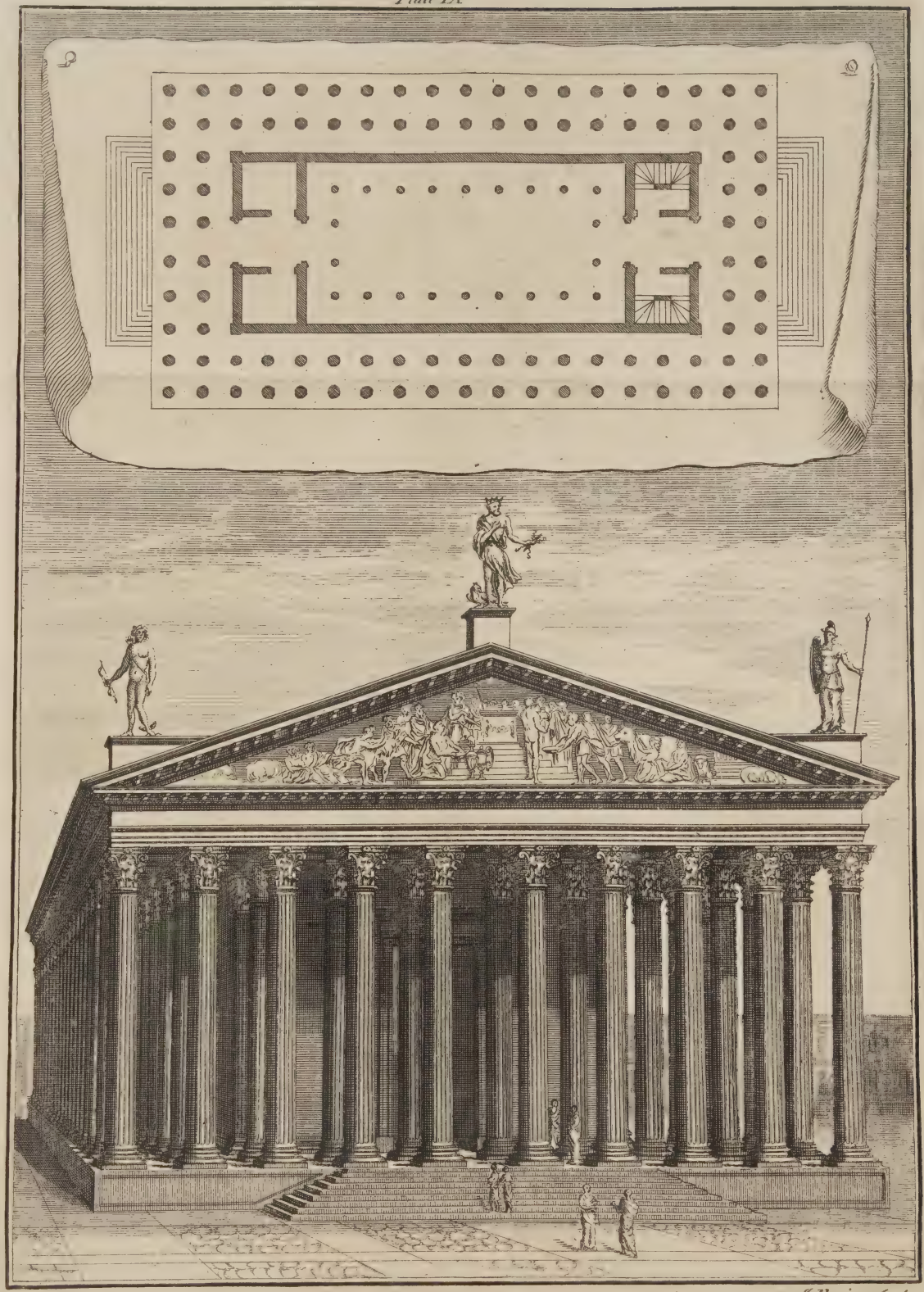
THIS ſixth kind of temple is called *Diptera*, from having two rows of pillars all round it. It is an *Octoſtyle*, that is to ſay, having eight pillars in front of the Ionic order, according to the example cited by Vitruvius, which is the temple of Diana at Epheſus built by Cteſiphon, the firſt of the four principal temples of Greece: Pliny tells us, it had been ſeven times rebuilt. It is repreſented in the plate as an *Euſtyle*, that is to ſay, having its intercolumniations of two diameters, and the fourth of a pillar, in order to render it in ſome meaſure conformable to the proportions given it by Pliny; for which reaſon alſo the ſpace between the two middle pillars is ſomewhat larger than ordinary. For Pliny tells us, that the architrave in the middle was ſo exceeding large, that it was feigned the goddeſs placed it there herſelf, upon the architect's deſpairing of being able to do it. Stairs are repreſented in the plan; becauſe the ſame author ſays, there were ſtairs to go up to the top of it, made all of a piece out of one tree, and that a vine too.

Plate VIII



VI. Temple of Diana at Ephesus.

I. Basire Sculp.



VII. Temple of Jupiter Olimpius at Athens.

J. Basire Sculp.

TEMPLE VII. Plate 9.

Of Jupiter Olympius at Athens.

THE ſeventh kind of temple is called *Hypæ-tra*, that is, open and expoſed to the weather. It is a *Decaſtyle*, having ten pillars in front; and a *Pycnoſtyle*, that is to ſay, having its pillars cloſe to each other, Vitruvius ſays, there were no temples of that kind at Rome, and gives that of Jupiter Olympius as an example of it; which, he tells us, in the preface of his ſeventh book, was built at Athens by Coſſutius, a Roman architect. Pauſanias ſays, it had pillars within it that formed a Periſtyle, which is eſſential to this kind of temple: but this Periſtyle could be repreſented on this plate only in the plan. Pauſanias alſo relates the ceremony repreſented on the pediment; which is the prieſt dawbing the altar of Jupiter with a mixture of aſhes brought from the Prytanæum, and the water of the river Alpheus; this was done every year on the nineteenth of February. He tells us beſides, that there was an aſcent to this altar of ſeveral ſteps.]

6. *Celebrated buildings at Rome.*

The art of building was almoſt as ſoon known in Italy as Greece, if it be true, that the Tuſcans had not had any communication with the Greeks, when they invented the particular order, which retains their name to this day. The tomb which Porſenna, king of Etruria, cauſed to be erected for himſelf, during his life-time, ſhews the great knowledge they had in thoſe days of this art. This ſtructure was of ſtone, and built almoſt in the ſame manner as the labyrinth of Dædalus in the iſland of Crete, if the tomb were ſuch as Varro has deſcribed it in a paſſage cited by Pliny.

Plin. l. 36. c. 13.

Tarquinius Priſcus had a little before erected very conſiderable works at Rome. For it was he who firſt incloſed that city with a wall of ſtone, and laid the foundations of the temple of Jupiter Capitolinus, which his grandſon Tarquinius Superbus finiſhed at a great expence, having for that purpoſe called in the beſt workmen from Etruria. The Roman citizens were not diſpenſed with from ſharing in that work, which, though very * painful and laborious, being added to the fatigues of war, they did not think too heavy; ſo much joy they conceived, and ſo much honour they thought it, to build the temples of their gods with their own hands.

The ſame † Tarquinius Priſcus raiſed two other works, not ſo ſplendid indeed in outward appearance, but far more conſiderable in regard to labour and

* Qui cum haud parvus & ipſe militiæ adderetur labor, minùs tamen plebs gravabatur, ſe templa deûm exædificare manibus ſuis. *Liv.* l. 1. n. 56.

† Quæ (plebs) poſthac & ad alia, ut ſpecie minora, ſic laboris aliquanto majoris, traducebatur opera: fores in circo faciendas, cloacamq; maximam receptaculum omnium purgamentorum urbis ſub terram agendam: quibus duobus operibus vix nova hæc magnificentia quicquam adæquare potuit. *Liv.* ibid.

expence:

Fragmentum picturæ veteris in pariete factæ, Romæ anno MDCCXXXVII inter palatii Cæsaris Augusti rudera, ubi nunc sunt horti Farnesiani, in monte Palatino repertum, in quo sex figuræ arte exquisita et nitidis coloribus sunt expressæ: quarum una exhibetur Augustus ipse sedens, et coronam alicui (cujus imago est abrupta) protendens; ceteris aulicis adstantes, inter quos Mæcenas toga cærulea indutus; et pone eum M. Agrippa humero ejus dextram imponens: prout harum imaginum cum nummis eorum gemmisque similitudo ostendit. Ex museo viri illustris R. Mead, M.D.

expence: works, says Livy, to which the magnificence of our days, in its most supreme degree, has scarce been capable of producing any thing comparable.

One of these works was the subterraneous sewers and canals that received all the dirt and filth of the city; the remains of which still raise admiration and astonishment from the boldness of the undertaking, and the greatness of the expence it must necessarily have cost to compleat it. And, indeed, of what thickness and solidity must these vaulted water-courses have been, which ran from the extremity of the city as far as the Tyber, to support, for so many ages, without ever giving way in the least, the enormous weight of the vast streets of Rome erected upon them, through which an infinity of carriages of immense weight were continually passing!

M. Scaurus, to adorn the stage of a theatre during his edileship, which was to continue only a month at most, had caused three hundred and sixty columns of marble to be prepared, many of which were thirty-eight feet high. When the time for the shews was expired, he had all those pillars carried into his own house. The undertaker, for making good the common sewers, obliged that edile to give him security for repairing the damage, that the carriage of so many heavy pillars might occasion to those vaults, which from the time of Tarquinius Priscus, that is to say, for almost eight hundred years, had continued immoveable, and still bore so excessive a load without giving way. Plin. l. 36, c. 2.

Besides which, these subterraneous canals contributed exceedingly to the cleanliness of the houses and streets, as well as to the purity and wholesomeness of the air. The water of seven brooks, which had been united together, and which was frequently turned into these subterraneous beds, cleansed them

entirely, and carried off along with them all the filth into the Tyber.

Works of this kind, though hid under the earth, and buried in darkneſs, will no doubt appear to every good judge more worthy of praiſe, than the moſt magnificent edifices, and moſt ſuperb palaces. Theſe ſuit the majeſty of kings indeed, but do not exalt their merit, and, properly ſpeaking, reflect no honour but on the ſkill of the architect: whereas the others argue princes, who know the true value of things; who do not ſuffer themſelves to be dazzled by falſe ſplendor; who are more intent upon the public utility than their own glory; and who are ſtudious to extend their ſervices and beneficence to the lateſt poſterity: objects worthy the ambition of a prince!

After the Tarquins were expelled Rome, the people, having aboliſhed monarchical government, and reſumed the ſovereign authority, were ſolely intent upon extending the bounds of their empire. When, in proceſs of time, they came to have more commerce with the Greeks, they began to erect more ſuperb and more regular buildings. For it was from the Greeks that the Romans learned to excel in architecture. Till then their edifices had nothing to recommend them but their ſolidity and magnitude. Of all the orders they knew only the Tuſcan. They were almoſt entirely ignorant of ſculpture, and did not even uſe marble: at leaſt they neither knew how to poliſh it, nor make pillars and other works of it, that by their beauty and excellent workmanſhip might make a magnificent appearance when applied in proper places.

Plin. l. 35. c. 6.

It was not, properly ſpeaking, till towards the latter times of the republic, and under the emperors, that is to ſay, when luxury was grown to a great height at Rome, that architecture appeared there in all its ſplendor. What a multitude of ſuperb buildings and magnificent works were erected, which ſtill

ſtill adorn Rome! The pantheon, the baths, the amphitheatre called the Coliſæum, the aqueducts, the cauſeways, the pillars of Trajan and Antonine, and the famous bridge over the Danube, built by the order of Trajan. This work alone would have ſufficed to have immortalized his name. It had twenty piles to ſupport the arches, each ſixty feet thick, and hundred and fifty high, without including the foundations, and an hundred and ſeventy feet diſtant from one another, which makes in all a breadth of fifteen hundred fourſcore and ten yards. This was, however, that part of the whole country in which the Danube was narroweſt, but at the ſame time deepeſt and moſt rapid; which ſeemed an obſtacle not to be ſurmounted by human induſtry. It was impoſſible to make dams in it for laying the foundation of the piles. Inſtead of which, it was neceſſary to throw into the bed of the river a prodigious quantity of different materials, and by that means to form a kind of baſes equal to the height of the water, in order afterwards to erect the piles upon them, and the whole ſuperſtructure of the bridge. Trajan made this bridge with the view of uſing it againſt the Barbarians. His ſucceſſor Adrian, on the contrary, apprehended its being uſed by the Barbarians againſt the Romans, and cauſed the arches of it to be demoliſhed. Apollodorus of Damaſcus was the architect who preſided in erecting this bridge: he had been employed in many other works by Trajan. His end was very unfortunate.

Dio. l. 68. p. 776.

The emperor Adrian had cauſed a temple to be built in honour of Rome and of Venus, at the extremities of which they were placed, each ſitting upon a throne: there is reaſon to believe that he had drawn the plan, and given the dimenſions himſelf, becauſe he piqued himſelf upon his excelling in all arts and ſciences. After it was built, Adrian ſent the draught of it to Apollodorus. He remem-

Dio. l. 69. p. 789, 790.

bered, that, one day inclining to give his opinion upon a building Trajan was diſcourſing about to Apollodorus, that architect had rejected what he ſaid with contempt, as talking of what he did not underſtand. It was therefore by way of inſult, and to ſhew him that ſomething great and perfect might be done without him, that he ſent him the deſign of this temple, with expreſs order to let him know his opinion of it. Apollodorus was naturally no flatterer, and ſaw plainly the affront intended him. After having praiſed the beauty, delicacy, and magnificence of the building, he added, that, ſince he was ordered to give his opinion of it, he could not deny but it had one fault; which was, that, if the goddeſſes ſhould have an inclination to riſe up, they would be in danger of breaking their heads, becauſe the arch of the roof was too confined, and the temple not high enough. The emperor was immediately ſenſible of the groſs and irreparable fault he had committed, and was inconſolable upon it. But the architect paid for it, and his too great ingenuity, which was not perhaps ſufficiently reſerved and reſpectful, coſt him his life.

Sueton. in Ner. c. 31. I have not ranked, in the number of the magnificent buildings of Rome, the palace called the Golden Houſe, which Nero cauſed to be erected there, though perhaps nothing like it was ever ſeen, either for the extent of its walls, the beauty of its gardens, the number and delicacy of its porticoes, the ſumptuoſity of its buildings, or the gold, pearls, jewels, and other precious materials with which it glittered. I do not think it allowable to give the name of magnificence to a palace built with the ſpoils, and cemented with the blood of the Roman citizens. Whence, ſays Suetonius, the buildings of Nero were more deſtructive to the empire than all his other follies: *Non in aliâ re damnoſior quam in ædificando.*

Cicero

Cicero had paſſed a ſtill more ſevere judgment upon it, who held no expences to be really laudable, but ſuch as had the public utility in view; as the walls of cities and citadels, arſenals, ports, aqueducts, cauſeways, and others of a like nature. He carried his rigour ſo far, as to condemn theatres, piazza's, and even new temples; and ſupported his opinion by the authority of Demetrius Phaleræus, who abſolutely condemned the exceſſive expences of Pericles in ſuch ſtructures. Cic. l. 2. de offic. n. 60.

The ſame Cicero makes excellent reflections upon the buildings of private perſons: for there is certainly a difference to be made in this point, as well as all others, in regard to princes. * He is for having perſons of the firſt rank in the ſtate lodged in an honourable manner, and that they ſhould ſupport their dignity by their habitations; but at the ſame time that their houſes ſhould not be their principal merit, and that the maſter ſhould do honour to the dwelling, and not the dwelling to the maſter. He recommends to the great men that build carefully to avoid the exceſſive expences incurred by the magnificence of ſtructures: expences, which become of fatal and contagious example to a city; the generality not failing, and making it a merit to imitate, and ſometimes even to exceed, the great. Palaces thus multiplied are ſaid to do honour to a city. They rather diſhonour it, becauſe they corrupt it, by rendering luxury and pomp continually neceſſary, by the coſtlineſs of furniture, and the other expenſive ornaments, required in lofty buildings; which are, beſides, often the cauſe of the ruin of families. Cic. l. 1. de offic. n. 139, 140.

* Ornanda eſt dignitas domo, non ex domo dignitas tota quærenda: nec domo dominus, ſed domino domus honeſtanda eſt—Cavendum eſt etiam, præſertim ſi ipſe ædifices, ne extra modum ſumptu & magnificentia prodeas. Quo in genere multum mali in exemplo eſt: ſtudioſè enim pleriq; præſertim in hac parte, facta principum imitantur.

Cato, in his book upon rural life, gives very wiſe advice. * When, ſays he, to build is the queſtion, we ſhould deliberate a great while, (and often not build at all;) but, when to plant, we ſhould not deliberate but plant directly.

In caſe we build, prudence requires our taking good precautions. "Formerly, ſays Vitruvius, "there was a ſevere but very juſt law at Epheſus, by which the architects who undertook a "public building, were obliged to declare what "it would coſt, and to do it for the price they had "demanded, for the performance of which their "whole eſtate was bound. When the work was "finiſhed, they were publicly honoured and rewarded, if the expence was according to their "eſtimate. If the expence exceeded the agreement "only a fourth, the public paid the ſurplus. But, "if it went beyond that, the architect made good "the deficiency. It were to be wiſhed, continues "Vitruvius, that the Romans had ſuch a regulation "in regard to their buildings, as well public as "private: it would prevent the ruin of abundance "of perſons." Vitruv. præfat. l. 10.

This is a very juſt reflection, and argues a very eſtimable character in Vitruvius, and a great fund of probity, which indeed diſtinguiſhes itſelf throughout his whole work, and does him no leſs honour than his great capacity. He followed his profeſſion with a noble diſintereſtedneſs, very uncommon in thoſe who practiſe it. † Reputation, not gain, was his motive. He had learned from his maſters, that an architect ought to ſtay till he is deſired to undertake Præfat. l. 6.

* Ædificare diu cogitare oportet, conſerere cogitare non oportet, ſed facere.

† Ego autem, Cæſar, non ad pecuniam parandam ex arte dedi ſtudium, ſed potius tenuitatem cum bona famâ quam abundantiam cum infamia ſequendam probavi. Cæteri architecti rogant & ambiunt, ut architectentur: mihi autem a præceptoribus eſt traditum, rogatum non rogantem oportere ſuſcipere curam, quod ingenuus color movetur pudore petendo rem ſuſpicioſam. Nam beneficium dantes, non recipientes, ambiuntur. *Vitruv.*

dertake a work; and that he cannot, without ſhame, make a demand, that ſhews him intereſted in it: becauſe every body knows people do not ſollicit others to do them good, but to receive it from them.

He requires in his profeſſion an extent of knowledge, that occaſions aſtoniſhment. According to him, an architect muſt be both ingenious and laborious: for capacity without application, and application without capacity, never make an excellent artiſt. He muſt therefore know how to deſign, underſtand geometry, not be ignorant of optics, have learnt arithmetic, know much of hiſtory, have well ſtudied philoſophy, with ſome knowledge of muſic, phyſic, civil law, and aſtronomy. He afterwards proceeds to ſhew particularly, in what manner each of theſe branches of learning may be uſeful to an architect. Vitr. l. 1. c. 1.

When he comes to philoſophy, beſides the knowledge neceſſary to his art, to be derived from phyſics, he conſiders it with regard to morals. "The ſtudy of philoſophy, ſays he, ſerves alſo "to render the architect more compleat, who "ought to have a ſoul great and bold, without "arrogance, equitable and faithful, and, what is "ſtill more important, entirely exempt from avarice: for it is utterly impoſſible ever to do any "thing well, or to attain any excellence without "fidelity and honour. He ought therefore to be "diſintereſted, and to have leſs in view the acquiring of riches, than honour and reputation, "by architecture; never acting any thing unworthy of ſo honourable a profeſſion: for this is "what philoſophy preſcribes."

Vitruvius has not thought fit to require in his architect the talent of eloquence, which it is often proper even to diſtruſt, as a very happy ſaying Plutarch has preſerved explains. It was occaſioned by a conſiderable building that the Athenians intended

tended to erect, for the execution of which two architects offered themselves to the people. The one, a fine speaker, but not very expert in his art, charmed and dazzled the whole assembly by the elegant manner in which he expressed himself in explaining the plan he proposed to follow. The other, as bad an orator as he was an an excellent architect, contented himself with telling the Athenians: * *Men of Athens, I will do what he has said.*

I conceived, that I could not conclude this article upon architecture better, than with giving some idea of the ability and manners of him, who, in the opinion of all good judges, practised and taught it with most reputation.

* Ἄνδρες Ἀθηναῖοι, ὡς ἔτω εἴρηκεν, ἐγὼ ποίησω.

CHAP.

CHAPTER IV.

OF SCULPTURE.

SECT. I.

Of the different ſpecies of ſculpture.

SCULPTURE is an art, which by the means of a deſign or plan and of ſolid matter, imitates the palpable objects of nature. Its matter is wood, ſtone, marble, ivory; different metals, as gold, ſilver, copper; precious ſtones, as agate, and the like. This art includes alſo caſting or founding, which is ſubdivided into the art of making figures of wax, and that of caſting them in all ſorts of metals. By ſculpture I underſtand here all theſe different ſpecies.

The ſculptors and painters have often had great diſputes amongſt themſelves upon the pre-eminence of their ſeveral profeſſions; the firſt founding the preference upon the duration of their works, and the latter oppoſing them with the effects of the mixture and vivacity of colours. But, without entering into a queſtion not eaſy to decide, ſculpture and painting may be conſidered as two ſiſters, that have but one origin, and whoſe advantages ought to be common; I might almoſt ſay as the ſame art, of which deſign is the ſoul and rule, but which work in a different manner, and upon different materials.

It is difficult and little important to trace, thro' the obſcurity of remote ages, the firſt inventors of ſculpture. Its origin may be dated with that of the

the world, and we may ſay that God was the firſt ſtatuary, when, having created all beings, he ſeemed to redouble his attention in forming the body of man, for the beauty and perfection of which he ſeems to have wrought with a kind of ſatisfaction and complacency.

Long after he had finiſhed this maſter-piece of his all-powerful hands, he was willing to be honoured principally by the ſculptor's application in building the ark of the covenant, of which himſelf gave the idea to the legiſlator of the Hebrews. But in what terms does he ſpeak to the admirable artiſt he thought fit to employ in it? *I have choſen*, ſays he to his prophet, *a man of the tribe of Judah, and I have filled him with the ſpirit of God, in wiſdom, and in underſtanding, and in knowledge, and in all manner of workmanſhip. To deviſe cunning works, to work in gold, and in ſilver, and in braſs. And in cutting of ſtones, to ſet them, and in cutting of timber, to work in all manner of workmanſhip.* Does not this ſeem as if the queſtion were the inſpiration of the prophet himſelf to give laws to his people. He ſpeaks in the ſame manner in reſpect to the workmen that are to build and adorn the temple of Jeruſalem.

Exodus xxxi.

Nothing could exalt the merit of ſculpture ſo much as ſo noble a deſtination, if it had fulfilled it faithfully. But, long before the building of the temple, and even the tabernacle, it had ſhamefully proſtituted itſelf for hire to idolatry, which by its means filled the world with ſtatues of falſe divinities, and expoſed them for the adoration of the people. * We find in the Scripture, that one of

* *Alſo the ſingular diligence of the artificer did help to ſet forward the ignorant to more ſuperſtition. For he, perad-venture, willing to pleaſe one in authority, forced all his skill to make the reſemblance of the beſt faſhion. And ſo the multitude, allured by the grace of the work, took him now for a god, who a little before, was but honoured as a man. And this was an occaſion to deceive the world.* Wiſd. xiv. 18, 19, 20, 21.

the

the cauſes which had conduced moſt to the ſpreading of this impious worſhip, had been the extreme beauty which the workmen, in emulation of each other, had exerted themſelves to give thoſe ſtatues: The admiration, excited by the view of theſe excellent works of art, was a kind of enchantment, which, by ſtrongly affecting the ſenſes, conveyed the illuſion to the mind, and drew in the multitude. It is againſt this univerſal deluſion Jeremiah admoniſhed the Iſraelites to beware, when they ſhould ſee in Babylon the ſtatues of gold and ſilver carried about in pomp upon the days of ſolemnity. At that time, ſays the prophet, when the whole multitude, filled with veneration and awe, ſhall proſtrate themſelves before the idols (for the captivity, in which the people of God were in a ſtrange land, would not admit them to expreſs themſelves aloud) ſay within yourſelves: IT IS ONLY THOU, O LORD, THAT OUGHT TO BE ADORED. Baruch vi. 6.

It muſt be owned alſo that ſculpture did not * contribute a little to the corruption of manners, by the nudity of the images, and repreſentations contrary to modeſty, as the Pagans themſelves have confeſſed. I thought it proper to premiſe this remark, that, in what I ſhall ſay hereafter in praiſe of ſculpture, the reader may ſee I diſtinguiſh the excellency of the art in itſelf, from the abuſe which men have made of it.

The firſt ſculptors made their works of earth, whether they were ſtatues, or moulds and models. This made the ſtatuary Paſiteles ſay, that the works which were either caſt, or cut with a chiſſel or graver, owed their being to the art of making figures of earth, called *Plaſtice*. It is ſaid that Demaratus, the father of Tarquinius Priſcus, who took refuge from Corinth in Etruria, brought thither abundance of workmen with him, who ex- Plin. l. 34. c. 12.

* Auxere & artem vitiorum irritamenta. *Plin. Proœm.* l. 33.

celled

celled in that art, and introduced the taſte for it there, which afterwards communicated itſelf to the reſt of Italy. The ſtatues erected in that country to the gods, were at firſt only of earth, to which, for their whole ornament, was added a red colour. We ought not to be aſhamed of the men, ſays * Pliny, who adored ſuch gods. They ſet no value upon gold and ſilver, either for themſelves or their deities. Juvenal calls a ſtatue, like that erected by Tarquinius Priſcus, in the temple of the father of the gods:

Fictilis, & nullo violatus Jupiter auro.
A Jove of earth, nor yet by gold profan'd.

A. M. 3820. It was very late before they began † to ſet up golden or gilt ſtatues at Rome. This was firſt done in the conſulſhip of P. Corn. Cethegus, and M. Bæbius Tamphilus, in the 571ſt, or 573d year of Rome.

Plin. l. 35. c. 12. Portraits were afterwards made alſo of plaiſter and wax, the invention of which is aſcribed to Lyſiſtratus of Sicyone, the brother of Lyſippus.

Pauſan. l. 6. Plin. l. 16. c. 40. We find that the antients made ſtatues of almoſt all ſorts of wood. There was an image of Apollo at Sicyone made of box. At Epheſus, according to ſome writers, that of Diana was of cedar, as well as the roof of the temple. The lemon-tree, the cypreſs, the palm, the olive, the ebony, the vine; in a word, all trees not ſubject to rot, or to be worm-eaten, were uſed for ſtatues.

Plin. l. 36. c. 4. Marble ſoon became the moſt uſual, and the moſt eſteemed material for works of ſculpture. It is be-

* Hæ tum effigies deorum erant laudatiſſimæ. Nec pœnitet nos illorum, qui tales deos coluere. Aurum enim & argentum ne diis quidem conficiebant. *Plin.*

† Acilius Glabrio duumvir, ſtatuam auratam, quæ prima omnium in Italia ſtatua aurata eſt, patri Glabrioni poſuit. *Liv.* l. 40. n. 34.

lieved

lieved that Dipænes and Scyllis, both of Crete, were the firſt who uſed it at Sicyone, which was long, in a manner, the centre and ſchool of arts: They lived about the 50th olympiad, a little before Cyrus reigned in Perſia. A. M. 3424.

Bupalus and Anthermus, two brothers, made themſelves famous for the art of carving marble, in the time of Hipponax, that is to ſay, in the 60th olympiad. That poet had a very ugly face. They made his portrait in order to expoſe it to the laughter of ſpectators. Hipponax conceived a more than poetic fury againſt them, and made ſuch virulent verſes upon them, that, according to ſome, they hanged themſelves through grief and ſhame. But this fact cannot be true, becauſe there were works of their making after that time. A. M. 3464.

At firſt the artiſts uſed only white marble, brought from the iſle of Pharos. It was reported, that, in cutting theſe blocks of marble, they ſometimes found nrtural figures of a Silenus, a god Pan, a whale and other fiſhes. Jaſper and ſpotted marble became afterwards the faſhion. It was brought principally from the quarries of Chio, and ſoon was commonly found in almoſt all countries. Plin. l. 36. c. 6.

It is believed, that the manner of cutting large blocks of marble into many thin pieces, to cover the walls of houſes, was invented in Caria. The palace of king Mauſolus at Halicarnaſſus is the moſt antient houſe that had theſe incruſtations of marble, which were one of its greateſt ornaments.

The uſe of ivory, in works of ſculpture, was known from the earlieſt ages of Greece. Homer ſpeaks of them, though he never mentions elephants. Odyſſ. Δ. v. 73.

The art of caſting gold and ſilver is of the greateſt antiquity, and cannot be traced to its origin. The gods of Laban, which Rachel ſtole, ſeem to have been of this kind. The jewels offered to Rebecca were of caſt gold. Before the Iſraelites left

Egypt,

Egypt, they had ſeen caſt ſtatues, which they imitated in caſting the golden calf, as they did afterwards in the brazen ſerpent. From that time all the nations of the eaſt caſt their gods, *deos conflatiles*; and God forbad his people to imitate them upon pain of death. In the building of the tabernacle, the workmen did not invent the art of founding: God only directed their taſte. It is ſaid, that Solomon cauſed the figures uſed in the temple, and elſewhere, to be caſt near Jericho, becauſe it was a clayey ſoil, *in argilloſa terra:* which ſhews that they had even then the ſame manner of founding great maſſes as we have.

It were to be wiſhed, that the Greek or Roman authors had informed us in what manner the antients caſt their metals in making figures. We
Plin. l. 37. find, by what Pliny writes upon that head, that they ſometimes made uſe of ſtone-moulds. Vitru-
Vitruv. l. 2. c. 7. vius ſpeaks of a kind of ſtones found about the lake Volſenus, and in other parts of Italy, which would bear the force of fire without breaking, and of which moulds were made for caſting ſeveral
Plin. l. 54. c. 14. ſorts of works. The antients had the art of mingling different metals in the mould, to expreſs different paſſions and ſentiments by the diverſity of colours.

There are ſeveral manners of carving metals and precious ſtones: for in both the one and the other they work in relief, and in hollow, which is called engraving. The antients excelled in both ways. The baſſo relievo's, which we have of theirs, are infinitely eſteemed by good judges: and as to engraved ſtones, as the fine agates and, cryſtals, of which there are abundance in the king of France's cabinet, it is generally ſaid, that there is nothing ſo exquiſite as thoſe of the antient maſters.

Though they engraved upon almoſt all kinds of precious ſtones, the moſt finiſhed figures, which we have of theirs, are cut upon onyxes, which

is a kind of agate not tranſparent, or on cornelians, which they found more fit for engraving than any other ſtones, becauſe they are more firm and even, and cut more neatly; and alſo becauſe there are different colours that run one above the other in the onyx, by the means of which in relievo the bottom continues of one colour, and the figures of another To engrave upon gems and cryſtals they uſed, as now, the point of a diamond.

The antients highly extolled the gem in the ring of Polycrates, tyrant of Samos, which he threw into the ſea, and was brought back to him by a very extraordinary accident: in Pliny's time it was pretended to be at Rome. It was, according to ſome, a ſardonyx; to others an emerald. That of Pyrrhus was no leſs eſteemed; upon which might be ſeen Apollo with his harp and the nine muſes, each with their particular ſymbol: And all this not the effect of art but of nature: *non arte, ſed ſponte naturæ.* Plin. l. 7. c. 1.

The art of ſculpture was principally employed upon cups uſed at feaſts: theſe pieces were very rich and curious, as well as of the moſt coſtly materials.

One of the greateſt advantages the art of making portraits ever received, for the eterniſing its works, is that of engraving upon wood and copper-plates, by the means of which a great number of prints are taken off, that multiply a deſign almoſt to infinity, and convey the artiſt's thoughts into different parts, which before could only be known from the ſingle piece of his own work. There is reaſon to wonder, that the antients, who engraved ſo many excellent things upon hard ſtones and cryſtals, did not diſcover ſo fine a ſecret, which indeed did not appear till after printing; and was, no doubt, an effect and imitation of it. For the impreſſion of figures and cuts did not begin to be uſed till the end of the fourteenth century. The world is indebted

for the invention of them to a goldſmith, that worked at Florence.

After having related, by way of abridgment, the greateſt part of what employed the ſculpture of the antients, it remains for me to give an account of ſome of thoſe who practiſed it with moſt ſucceſs and reputation.

SECT. II.

Sculptors moſt celebrated amongſt the antients.

THough ſculpture had its birth in Aſia and Egypt, it was from Greece, properly ſpeaking, that it derived its luſtre and perfection. Not to mention the firſt rude eſſays of this art, which always carry with them the marks of their infantile ſtate, Greece produced, eſpecially in the time of Pericles * and after him, a multitude of excellent artiſts, who laboured, in emulation of each other, to place ſculpture in honour by an infinite number of works, which have been, and will be, the admiration of all ages. Attica †, fertile in quarries of marble, and ſtill more abundant in happy genius's for the arts, was ſoon inriched with an infinite number of ſtatues.

I ſhall mention here only ſuch of them, as were moſt diſtinguiſhed by their ability and reputation. The moſt celebrated are Phidias, Polycletus, Myron, Lyſippus, Praxiteles, and Scopas.

There is another ſtill more illuſtrious than all I have named, but in a different way: this is the famous Socrates. I ought not to envy ſculpture the honour ſhe had of reckoning Socrates amongſt her

* Multas artes ad animorum corporumq; cultum nobis eruditiſſima omnium gens (Græca) invenit. *Liv.* l. 39. c. 8.

† Exornata eo genere operum eximiè terra Attica, & copia domeſtici marmoris, & ingenio artificum. *Liv.* l. 31. n. 26. *Theſe marbles were dug in the Pentelic mountain, which was in Attica.*

pupils.

pupils. He was the ſon of a ſtatuary, and was one himſelf, before he commenced philoſopher. The three graces, which were carefully preſerved in the citadel of Athens, were generally aſcribed to him. They were not naked, as it was uſual to repreſent them, but covered: which ſhews what inclination he had at that time for virtue. He ſaid, that this art had taught him the firſt precepts of philoſophy; and that, as ſculpture gives form to its ſubjects by removing its ſuperfluities, ſo that ſcience introduces virtue into the heart of man, by gradually retrenching all his imperfections. Diog. Laert. in Socr.

PHIDIAS.

Phidias, for many reaſons, deſerves to be placed at the head of the ſculptors. He was an Athenian, and flouriſhed in the 83d olympiad; happy times, wherein, after the victories obtained over the Perſians, abundance, the daughter of peace, and mother of arts, produced various talents by the protection Pericles afforded them! Phidias was not one of thoſe artiſts who only know how to handle the tools of their profeſſion. He had a mind adorned with all the knowledge that could be uſeful to a man of his profeſſion; hiſtory, poetry, fable, geometry, and optics. A fact, not a little curious, will ſhew in what manner the latter was uſeful to him. A. M. 3556.

Alcamenes and he were each employed to make a ſtatue of Minerva, in order that the fineſt of them might be choſen, and placed on a very high column. When the two ſtatues were finiſhed, they were expoſed to the view of the public. The Minerva of Alcamenes, when ſeen near, ſeemed admirable, and carried all the voices. That of Phidias, on the contrary, was thought inſupportable; a great open mouth, noſtrils which ſeemed drawn in, and ſomething rude and groſs throughout the whole viſage.

Phidias and his ſtatues were ridiculed. *Set them*, ſaid he, *where they are to be placed:* which was accordingly done alternately. The Minerva of Alcamenes appeared then like nothing, whilſt that of Phidias had a wonderful effect from its air of grandeur and majeſty, which the people could never ſufficiently admire. Phidias received the approbation his rival had before, who retired with ſhame and confuſion, very much repenting that he had not learnt the rules of optics.

The ſtatues, ſo much extolled before the times we now ſpeak of, were more eſtimable for their antiquity than merit. Phidias was the firſt who gave the Greeks a taſte for the Fine in nature, and taught them to copy it. * Hence, as ſoon as his works appeared, they were univerſally admired; and what is ſtill more aſtoniſhing than that he made admirable ſtatues, is, his making ſo many of them: for their number, according to authors, ſeems incredible; and he perhaps is the only one that ever united ſo much facility with ſuch perfection.

Pauſan. in Attic. p. 62. I believe he worked with great pleaſure upon a block of marble, found in the Perſian camp after the battle of Marathon, in which thoſe Barbarians were entirely defeated. They had aſſured themſelves of victory, and had brought that ſtone thither, in order to erect it as a trophy. Phidias made a Nemeſis of it, the goddeſs whoſe function it is to humble and puniſh the inſolent pride of men. The natural hatred of the Greeks for the Barbarians, and the grateful pleaſure of avenging their country, undoubtedly animated the ſculptor's genius with new fire, and lent new force and addreſs to his hands and chiſſel.

Id. in Bœot. p. 548. At the price of the ſpoils taken from the ſame enemies, he made a ſtatue of Minerva alſo for the

* Quinti Hortenſii admodum adoleſcentis ingenium, ut Phidiæ ſignum, ſimul aſpectum & probatum eſt. *Cic. de clar. Orat.* n. 228.

Platæans.

Platæans. It was of wood gilt. The face, as well as the hands and feet, were of Pentelic marble.

His talent lay principally in repreſenting the gods. His imagination was great and noble; ſo that, * according to Cicero, he did not copy their features and reſemblance from any viſible objects, but by the force of genius formed an idea of true beauty, to which he continually applied himſelf, and which became his rule and model, and directed his art and execution.

Hence Pericles, who had an higher opinion of him than of all the other architects, made him director and a kind of ſuperintendant of the buildings of the republic. When the Parthenon, that magnificent temple of Minerva, was finiſhed, of which ſome remains not ill preſerved ſtill charm travellers, and it was to be dedicated, which conſiſted in ſetting up the ſtatue of the goddeſs in it, Phidias was charged with the work, in which he excelled himſelf. He made a ſtatue of gold and ivory, of twenty-ſix cubits (or thirty-nine feet) high. The Athenians choſe to have it of ivory, which at that time was much more ſcarce and valuable than the fineſt marble.

How rich ſoever this prodigious ſtatue was, the ſculptor's art infinitely ſurpaſſed the materials of it. Phidias had carved, upon the convex part of Minerva's ſhield, the battle of the Athenians with the Amazons; and, upon the concave, that of the giants with the gods; upon the buſkins of the goddeſs he added the battle of the Centaurs and Lapithæ; on the pedeſtal the birth of Pandora, with all that fable ſays of it. Cicero, Pliny, Plutarch, Pauſanias, and ſeveral other great writers of anti- Plin. l. 36. c. 5.

* Phidias, cum faceret Jovis formam aut Minervæ, non contemplabatur aliquem a quo ſimilitudinem duceret: ſed ipſius in mente inſidebat ſpecies pulchritudinis eximia quædam, quam intuens, in eaq; defixus, ad illius ſimilitudinem artem & animum dirigebat. *Cic. in Orat.* n. 9.

quity, all connoiſſeurs, and eye-witneſſes of it, have ſpoke of this ſtatue. Their teſtimony leaves no room to doubt its having been one of the fineſt pieces of workmanſhip that ever was in the world.

Plut. in Pericl. p. 169.

Some aſſure us, ſays Plutarch, that Phidias put his name upon the pedeſtal of his Minerva at Athens. Pauſanias does not mention this circumſtance, which Cicero entirely denies, who ſays expreſsly, that * Phidias, not being permitted to put his name to the ſtatue, had cut his portrait upon the goddeſs's ſhield. Plutarch adds, that Phidias had repreſented himſelf in the form of an old man, quite bald, raiſing a large ſtone with both his hands; and had alſo repreſented Pericles fighting with an Amazon, but in ſuch an attitude, that his hand, which was extended to throw a javelin hid part of his face.

The moſt excellent artiſts have always affected to inſert their names in their works, in order to partake of the immortality they gave others. Myron, † that famous ſtatuary, to immortalize his name, put it in characters almoſt imperceptible, upon one of the thighs of the ſtatue of Apollo. Pliny relates, that two Lacedæmonian architects, Saurus and Batrachus, without accepting any reward, built ſome temples in a part of the city of Rome, which Octavia cauſed afterwards to be incloſed with galleries. They flattered themſelves, that they ſhould have liberty to ſet their names upon them, which indeed ſeems the leaſt recompence due to their generous diſintereſtedneſs. But we find that, in thoſe days, the perſons, who employed the moſt able artiſts, took all poſſible precautions to avoid ſharing the eſteem and attention of poſterity with ſimple workmen. Theſe were abſolutely refuſed their demand. Their addreſs how-

* Phidias ſimilem ſui ſpeciem incluſit in clypeo Minervæ, cum inſcribere non liceret. *Tuſcul.* l. 1. n. 34.

† Signum Apollinis pulcherrimum, cujus in femore literulis minutis argenteis nomen inſcriptum Myronis. *Cic. Verrin. de ſign.* n. 93.

ever

ever ſupplied them with an amends. They threw in, by way of ornament, lizards and frogs upon the baſes and capitals of all the columns. The name of Saurus was implied by the lizard, which the the Greeks call σαῦρα, and that of Batrachus by the frog, which they call βάτραχος.

The prohibition I ſpeak of was not general in Greece, of which we ſhall ſoon ſee a very extraordinary inſtance in relation to Phidias himſelf: it was perhaps peculiar to Athens. However it was, his having given the two portraits a place in the ſhield of Minerva was made criminal. Nor was that all; Menon, one of his pupils, demanded to be heard, and made himſelf his accuſer. He alledged that he had applied to his own uſe part of the * forty-four talents of gold, which were to have been uſed in the ſtatue of Minerva. Pericles had foreſeen what would happen, and by his advice Phidias had uſed the gold in his Minerva in ſuch a manner, that it could eaſily be taken out and weighed. It was weighed accordingly, and to the accuſer's ſhame found to amount to the forty-four talents. Phidias, who plainly ſaw that his innocence would not ſecure him againſt the malignant jealouſy of thoſe who envied him, and the intrigues of Pericles's enemies, who had hatched this affair againſt him, withdrew privately to Elis. Plut. in Pericl. p. 169.

He there conceived thoughts of avenging himſelf upon the injuſtice and ingratitude of the Athenians, in a manner pardonable and allowable in an artiſt, if ever revenge could be ſo: which was by employing his whole induſtry in making a ſtatue for the Eleans, that might eclipſe his Minerva, which the Athenians looked upon as his maſterpiece. This he effected. His Jupiter Olympius

* *In ſuppoſing the proportion of gold to ſilver as ten to one, forty-four talents of gold amounted to four hundred and forty talents, that is to ſay, to one million three hundred and twenty thouſand livres, ſomething leſs than ſixty thouſand pounds ſterling.*

was a prodigy of art, and so perfectly such, that, to set a just value upon it, it was thought that it deserved to be ranked amongst the seven wonders of the world. Nor had he forgot any thing that might conduce to its perfection. Before he had entirely finished it, he exposed it to the view and judgment of the public, hiding himself in a corner, from whence he overheard all that was said of it. One thought the nose too thick, another the face too long; and different persons found different faults. He made the best use he could of all the criticisms that seemed to have any just foundation; convinced, says Lucian, who relates this fact, that many eyes see better than one. An excellent reflection in every kind of work!

Lucian in imaginib. p. 31.

This statue of gold and ivory, sixty feet high, and of a proportionate magnitude, made all succeeding statuaries despair. None of them had the presumption only to imagine that they could imitate it: *Præter Jovem Olympium, quem nemo æmulatur*, says Pliny. According to Quintilian, the majesty of the work equalled that of the god, and even added to the religion of all who saw it: *Ejus pulcritudo adjeciſſe aliquid etiam receptæ religioni videtur, adeò majeſtas operis deum æquavit.* Those who beheld it, were struck with astonishment, and asked whether the god had descended from heaven to shew himself to Phidias, or Phidias had been carried thither to contemplate the god. Phidias himself, upon being asked from whence he had taken his idea of his Jupiter Olympius, repeated the three fine verses of Homer, in which the poet represents the majesty of that god in the most sublime terms; thereby signifying that the genius of Homer had inspired him with it.

Plin. l. 34. c. 8.

Quintil. l. 12. c. 10.

Val. Max. l. 3. c. 7.

At the base of the statue was this inscription: PHIDIAS THE ATHENIAN, THE SON OF CHARMIDES, MADE ME. Jupiter seems here to glory in a manner that he is the work of Phidias, and to declare

Pausan. l. 5. p. 303.

declare so by this inscription; tacitly to reproach the Athenians with their vicious delicacy, in not suffering that excellent artist to annex his name or portrait to the statue of Minerva.

Pausanias, who had seen and carefully examined this statue of Jupiter Olympus, has left us a very long and very fine description of it. The Abbé Gedoyn has inserted it in his dissertation upon Phidias, which he has read in the academy of inscriptions, and was pleased to communicate to me. I have made use of it in what I have related of this famous statuary.

The statue of Jupiter Olympius raised the glory of Phidias to its highest degree, and established him a reputation, which two thousand years have not obliterated. He finished his labours with this great master-piece. The shop where he worked was preserved long after his death, and travellers used to visit it out of curiosity. The Eleans, in honour of his memory, instituted an office in favour of his descendants, the whole duty of which consisted in keeping this magnificent statue clean, and in preserving it from whatever might fully its beauty. Paus. l. 5. p. 313.

Polycletus.

Polycletus was of Sicyone, a city of Peloponnesus, and lived in the 87th olympiad. Ageladus was his master, and several very famous sculptors his disciples, of which number was Myron, of whom we shall soon speak. He made several statues of brass, which were highly esteemed. One of them represented a beautiful young man, with a crown on his head, which was sold for an hundred talents, that is, an hundred thousand crowns. But what gave him the most reputation was the * statue of Plin. l. 34. c. 8. A. M. 3771.

* Fecit & quem canona artifices vocant, lineamenta artis ex eo petentes velut a lege quadam, soluſque hominum artem ipſe feciſſe artis opere judicatur. *Plin.*

a * Doryphorus, in which all the proportions of the human body were ſo happily united, that it was called *the Rule*; and the ſculptors came from all parts, to form in themſelves, by ſtudying this ſtatue, a juſt idea of what they had to do, in order to excel in their art. † Polycletus is univerſally admitted to have carried the art of ſculpture to its higheſt perfection, as Phidias is for having been the firſt to place it in honour.

Ælian. l. 14. c. 8. Whilſt he was at work upon a ſtatue, by order of the people, he had the complaiſance to hearken to all the advice they thought fit to give him, to retouch his work, and to change and correct in it whatever diſpleaſed the Athenians. But he made another in private, in which he followed only his own genius, and the rules of art. When they were expoſed together to the view of the public, the people were unanimous in condemning the firſt, and admiring the other. *What you condemn*, ſays Polycletus to them, *is your work*; *what you admire is mine.*

Myron.

Little is known of this ſtatuary. He was an Athenian, or at leaſt paſſed for one, becauſe the inhabitants of Eleutheria, the place of his nativity, had taken refuge at Athens, and were regarded as citizens of it. He lived in the 84th olympiad. His works rendered him very famous, eſpecially a cow, which he made in braſs, and which gave occaſion for abundance of fine Greek epigrams, inſerted in the fourth book of the Anthologia, *(Florilega.)*

A. M. 3560.

Lysippus.

Plin. l. 34. c. 8. A. M. 3676. Lyſippus was a Sicyonian, and lived in the time of Alexander the Great, in the 113th olympiad.

* *So the guards of the king of Perſia were called.*

† Hic conſummâſſe hanc ſcientiam judicatur, & toreuticen ſic eruditſſe, ut Phidias aperuiſſe. *Plin.*

He

He followed at first the business of a locksmith; but his happy genius soon induced him to take up a profession more noble and more worthy of him. He used to say, * that the Doryphorus of Polycletus had served him instead of a master. But the painter Eupompus directed him to a much better and more certain guide. For † upon Lysippus's asking him, which of his predecessors in the art of sculpture it was best to propose to himself as a model and master; *no man in particular*, replied he, *but nature herself*. He afterwards studied her solely, and made great improvements from her lessons.

He worked with so much ease, that, of all the antients, none made so great a number of statues as himself; they are said to amount to six hundred.

He made, amongst others, the statue of a man, rubbing himself after bathing, of exquisite beauty. Agrippa set it up in Rome before his baths. ‡ Tiberius, who was charmed with it, having attained the empire, could not resist his desire to possess it, though in the first years of his reign, in which he was sufficiently master of himself to moderate his passions: so that he removed the statue into his own chamber, and caused another very fine one to be put up in the same place. The people, who feared Tiberius, could not however refrain from crying out in the full theatre, that they desired the statue might be replaced: with which the emperor, how fond soever he was of the statue, was obliged to comply, in order to appease the tumult.

Lysippus had made several statues of Alexander, according to his several ages, having begun at his

* Polycleti Doryphorum sibi Lysippus aiebat magistrum fuisse, *Cic. in Brut.* n. 296.

† Eum interrogatum quem sequeretur præcedentium, dixisse, demonstrata hominum multitudine, naturam ipsam imitandam esse, non artificem. *Plin.*

‡ Mirè gratum Tiberio principi, qui non quivit temperare sibi in eo, quanquam imperiosus sui inter initia principatus, transtulitq; in cubiculum, alio ibi signo substituto. *Plin.*

infancy.

infancy. * It is well known, that prince had forbad all ſtatuaries but Lyſippus to make his ſtatue, as he had done all painters but Apelles to draw his picture; † rightly judging, ſays Cicero, that the ſkill of thoſe two great maſters, in perpetuating their own names, would alſo immortalize his: for it was not to pleaſe them he publiſhed that edict, but with a view to his own glory.

Amongſt theſe ſtatues, there was one of exquiſite beauty, upon which Nero ſet an high value, and was particularly fond of. But, as it was only of copper, ‡ that prince, who had no taſte, and was ſtruck with nothing but glare, thought fit to have it gilt. This new decoration, as coſtly as it was, made it loſe all its value, by covering the delicacy of the art. All this gaudy ſupplement was obliged to be taken off, by which means the ſtatue recovered part of its original beauty and value, notwithſtanding the traces and ſcars the putting on and taking off the gold had left upon it. In the bad taſte of Nero methinks I ſee that of ſome people, who induſtriouſly ſubſtitute the tinſel of conceits and witticiſms to the precious and ineſtimable ſimplicity of the antients.

Lyſippus is ſaid to have added much to the perfection of ſtatuary, in expreſſing the hair better than thoſe who preceded him, and in making the heads leſs, and the bodies not ſo large, in order to make the ſtatues ſeem higher. ‖ Upon which Ly-

* Edicto vetuit nequis ſibi præter Apellem pingeret, aut alius Lyſippo duceret æra fortis Alexandri vultum ſimulantia. *Hor.* l. 2. *Epiſt. ad Aug.*

† Neque enim Alexander gratiæ causâ ab Apelle potiſſimùm pingi, & a Lyſippo fingi volebat, ſed quod illorum artem cum ipſis, tum etiam ſibi, gloriæ fore putabat. *Cic. ad famil.* l. 5. *Epiſt.* 12.

‡ Quam ſtatuam inaurari juſſit Nero princeps, delectatus admodum illa. Dein, cum pretio periſſet gratia artis, detractum eſt aurum; pretioſiorq; talis exiſtimatur, etiam circatricibus operis atq; conſciſſuris, in quibus aurum hæſerat, remanentibus. *Plin.*

‖ Vulgo dicebat ab illis (veteribus) factos, quales eſſent homines; a ſe quales viderentur eſſe.

ſippus

ſippus ſaid of himſelf, *that others repreſented men in their ſtatues as they were; but he, as they appeared*; that is to ſay, if I miſtake not, in the manner that was moſt proper to make them appear with all their beauty. The chief point in ſculpture, as well as in painting, is to follow and imitate nature: Lyſippus, we ſee, made it his guide and rule. But art does not ſtop there. Without ever departing from nature, it throws in ſtrokes and graces, which do not change, but only embelliſh it, and catch the eye in a more lively and agreeable manner. * Demetrius, otherwiſe an excellent ſtatuary, was reproached with confining himſelf too ſcrupulouſly to truth, and for being more ſtudious of likeneſs than beauty in his works. This Lyſippus avoided.

PRAXITELES.

Praxiteles lived in the 104th olympiad. We must not confound him with another Praxiteles, who made himſelf famous in the time of Pompey, by excellent works in the goldſmith's art. He we ſpeak of is of the firſt rank among the ſtatuaries. He worked chiefly in marble, and with extraordinary ſucceſs. A.M. 3640.

Amongſt the great number of ſtatues made by him, it would have been hard to know which to prefer, unleſs himſelf had informed us: which he does in a manner that has ſomething ſingular enough in it. Phryne, the celebrated courteſan, was much in his favour. She had often preſſed him to make her a preſent of one of the beſt of his works, and that which he believed the moſt finiſhed; and he could not refuſe it. But, when he was to judge which it was, he deferred doing ſo from day to day; whether he found it difficult to determine Pauſan. l. 1. p. 34.

* Demetrius tanquam nimius in ea (veritate) reprehenditur; & fuit ſimilitudinis quam pulchritudinis amantior. *Quintil.* l. 12. c. 10.

him-

himſelf, or rather ſtrove to evade her warm and earneſt ſolicitations, by protracting the affair. Perſons of Phryne's profeſſion ſeldom want induſtry and addreſs. She found a means to get the ſecret out of Praxiteles, in ſpite of himſelf. One day when he was with her, ſhe made his own ſervant, whom ſhe had gained to her purpoſe, come running to tell him: "Your workhouſe is on fire, and part "of your works already ſpoiled: Which of them "ſhall I ſave?" The maſter, quite out of his ſenſes, cried out, "I am ruined and undone, if "the flames have not ſpared my ſatyr and my "Cupid. Be in no pain, Praxiteles, reſumed "Phryne immediately, there is nothing burnt: "but now I know what I wanted." Praxiteles could hold out no longer. She choſe the Cupid, which ſhe afterwards ſet up at Theſpiæ, a city of Bœotia, where ſhe was born, and whither people went long after to ſee it out of curioſity. When Mummius took ſeveral ſtatues from Theſpiæ to ſend them to Rome, he paid ſome regard to this, becauſe conſecrated to a god. The Cupid of Verres, mentioned by Cicero, was alſo done by Praxiteles, though not the ſame with this.

It is undoubtedly of the firſt that mention is made in Mr. de Thou's memoirs. The fact is very curious, wherefore I ſhall tranſcribe it as related there: Mr. de Thou, when young, went into Italy with Mr. de Foix, whom the court ſent thither. They were then at Pavia. Amongſt other rarities which Iſabella of Eſte, the duke of Mantua's grandmother, had diſpoſed with great care and order, in a magnificent cabinet, Mr. de Thou was ſhewn an admirable piece of ſculpture; this was a Cupid ſleeping, made of the fine marble of Spezzia, by the celebrated Michael Angelo Buonarotti, who revived the arts of painting, ſculpture, and architecture, which had long been neglected before him. De Foix, upon the account given him of this maſter-

Upon the coaſt of Genoa.

ſter-piece, went to ſee it. All his train, and De Thou himſelf, who had a very exquiſite taſte for works of this kind, after having attentively conſidered it on all ſides, declared unanimouſly, that it was infinitely above all praiſe that could be given it.

When they had admired it for ſome time, another Cupid was ſhewn them, that had been wrapped up in a piece of ſilk. This monument of antiquity, ſuch as the many epigrams written by Greece * of old in its praiſe repreſent it, was ſtill ſoiled with the earth out of which it had been taken. Upon comparing the one with the other, the whole company were aſhamed of having judged ſo much to the advantage of the firſt, and agreed that the antient Cupid ſeemed inſtinct with life, and the modern a mere block of marble, without expreſſion. Some perſons of the houſe then aſſured them, that Michael Angelo, who was more ſincere than great artiſts generally are, had earneſtly requeſted the counteſs Iſabella, after having made her a preſent of his Cupid, and ſeen the other, that the antient one ſhould be ſhewn laſt; that the connoiſſeurs might judge, on ſeeing them both, how much the antients excelled the moderns in works of this kind.

But the moſt judicious are ſometimes miſtaken, as the ſame Michael Angelo himſelf has given us a proof. Having made the figure of a Cupid, he carried it to Rome; and, having broken off one of its arms, which he kept, he buried the reſt in a place which he knew was to be dug. This figure being found, it was admired by the connoiſſeurs, and ſold for an antique to the cardinal San Gregorio. Michael Angelo ſoon undeceived them, by producing the arm he had kept. There is ſomething very extraordinary in having ability

Mr. de Bile's life of M. Angelo.

* *There are two and twenty epigrams upon this Cupid in the fourth book of the Anthologia.*

enough

enough to imitate the antients so perfectly, as to deceive the eyes of the best judges; and at the same time so much modesty, as to confess ingenuously a great superiority on their side, as wee see Michael Angelo did.

Something like this is related on a different occasion. Joseph Scaliger, the most learned critic of his times, boasted that it was impossible for him to be deceived in regard to the stile of the antients. Six verses were sent abroad as lately discovered; they are,

Here, si querelis, ejulatu, fletibus,
Medicina fieret miseriis mortalium,
Auro parandæ lacrymæ contra forent.
Nunc hæc ad minuenda mala non magis valent,
Quam Nænia Præficæ ad excitandos mortuos.
Res turbidæ consilium non fletum expetunt.

These verses, which are admirable, and have all the air of antiquity, deceived Scaliger so effectually, that he cited them in his commentary upon Varro, as a fragment from Trabea, not long since discovered in an antient manuscript. Trabea was a comic poet, and lived six hundred years after the foundation of Rome. They were, however, made by Muretus, who played Scaliger, his rival and competitor, this trick.

Athen. l. 13. p. 591. We may believe that Praxiteles, abandoned as he was to Phryne, did not fail to employ the work of his hands for her, who had made herself the mistress of his heart. One of Phryne's statues was placed afterwards in Delphos itself, between those of Archidamus, king of Sparta, and Philip king of Macedon. How infamous this! If riches were a title to a place in that temple, she might well pretend to it: for her's were immense. She had the impudence (for by what other name can I call the fact I am going to relate?) to engage to rebuild

rebuild the city of Thebes at her own expence, provided this inſcription were placed on it: ALEXANDER DESTROYED, AND PHRYNE REBUILT THEBES.

The inhabitants of the iſle of Cos had demanded a ſtatue of Venus from Praxiteles. He made two, of which he gave them their choice at the ſame price. The one was naked, the other covered; but the firſt was infinitely the moſt beautiful: *immenſa differentia famæ.* The people of Cos had the wiſdom to give the preference to the latter; convinced that decency, politeneſs, and modeſty, did not admit them to introduce an image into their city, that might be of infinite prejudice to their manners: *Severum id ac pudicum arbitrantes.* How many Chriſtians does this chaſte conduct diſgrace? The Cnidians were leſs attentive in point of morals. They bought the rejected Venus with joy, which afterwards became the glory of their city; whither people went from remote parts to ſee that ſtatue, which was deemed the moſt finiſhed work of Praxiteles. Nicomedes, king of Bithynia, ſet ſo high a value upon it, that he offered to releaſe all the debts the Cnidians owed him, which were very conſiderable, provided they would give it him. They thought it would diſhonour and even impoveriſh them to ſell for any price whatſoever a ſtatue, which they conſidered as their glory and riches. Plin. l. 36. c. 5.

SCOPAS.

Scopas was both an excellent architect, and an excellent ſculptor. He was of the iſland of Paros, and flouriſhed in the 87th olympiad. Amongſt all his works, his Venus held the firſt rank. It was even pretended, that it was ſuperior to the ſo much renowned one of Praxiteles. It was carried to Plin. l. 36. c. 5. A. M. 3572.

Rome: * but, says Pliny, the number and excellency of the works, which abound in this city, obscure its lustre; besides which, the employments and affairs, that engross people here, scarce afford them time to amuse themselves with these curiosities; to consider and admire the beauties of which requires persons of leisure, and such as have no business, as well as places quiet and remote from noise.

Plin. l. 36. c. 14. I have observed elsewhere, that the pillar, which he made for the temple of Diana at Ephesus, was reputed the finest in that building.

Ibid. c. 5. Vitr. præfat. l. 7. He also very much contributed to the beauty and ornament of the famous Mausolæum, erected by queen Artemisia, to the memory of her husband Mausolus, in the city of Halicarnassus, which was reckoned one of the seven wonders of the world, as well for its magnitude and loftiness of architecture, as the quantity and excellence of the works of sculpture, with which it was inriched. Several illustrious competitors divided the glory of this structure with Scopas. I purposely referred to this place the description Pliny has left of us part of this superb pile, because it relates more to sculpture than architecture.

The extent of this Mausolæum was sixty-three feet from north to south. The fronts not quite so broad, and the circumference † four hundred and eleven feet. It was thirty six feet and an half high, and had thirty-six pillars around it. Scopas undertook the east side, Timotheus had the south, Leocharis the west, and Briaxis the north. These

* Romæ quidem magnitudo operum eam (Venerem) obliterat, ac magni officiorum negotiorumq; acervi omnes a contemplatione talium operum abducunt, quoniam otiosorum & in magno loci silentis apta admiratio talis est. *Plin.*

† *There was apparently a wall round the Mausolæum, and some void space between it and that wall; which seems necessary to make up the extent of the circumference mentioned here.*

were

were the most famous sculptors of those times. Artemisia died before they had finished the work: but they believed it not for their honour to leave it imperfect. It is doubted to this day, says Pliny, which of the four succeeded best: *Hodieque certant manus.* Pythis joined them, and added a pyramid to the top of the Mausolæum, upon which he placed a chariot of marble drawn by four horses. Anaxagoras of Clazomena said coldly when he saw it: *Here's a great deal of money turned into stone.* Diog. Laert. in Anaxag. Plin. l. 34. c. 8.

I ought not to conclude this article, without mentioning a very singular dispute, in which two of the most celebrated statuaries I have spoken of were engaged, even after their deaths: these were Phidias and Polycletus. I have observed above, that the temple of Diana at Ephesus was not finished till after a long series of years. The question was, at a time Pliny does not fix, to place in it some statues of Amazons, very probably to the number of four. Several had been done by the greatest masters both dead and living. The majesty of the temple required, that none should be admitted which were not exquisitely finished. It was necessary, upon this occasion, to consult the most accomplished sculptors in being, how interested soever they might be in the dispute. Each gave himself the first place, and afterwards named those they believed to have succeeded best; and it was the sculptors who had the majority of these latter suffrages, that were declared victorious. Polycletus had the first place, Phidias the second, and Cteſilas and Cylon the two others. Something of the same nature had happened long before, but on a different occasion. After the battle of Salamis, the Grecian captains, according to a custom observed in those times, were to set down on a paper him they believed to have distinguished himself most in the action. Each named himself first, and Themis- Plut. in Themist. p. 120.

tocles second; which was in reality giving him the first place.

It is plain, that, in the short enumeration I have made of the antient statuaries, I have chosen only the very flower of the most famous. There are many others, and of great reputation, which I am obliged to omit, to avoid enlarging my work too much. Cicero highly extols the statue of Sappho in copper, done by the celebrated statuary Silanion. Nothing was more perfect than this statue: Verres had taken it from the Prytanæum of Syracuse. Pliny relates, that the same Silanion had cast the statue of Apollodorus, his brother sculptor, in brass, who was a passionate man, and violent against himself; and who often, in the heat of his disgust, broke his own works to pieces, because he could not carry them to that supreme degree of perfection, of which he had the idea in his thoughts. Silanion represented this furious humour in so lively a manner, that it did not seem so much to express Apollodorus, as rage itself in person: *Hoc in eo expressit, nec hominem ex ære fecit, sed iracundiam.*

Florem hominum libantibus.

Cic. in Verr. de sign. n. 125, 127.

Plin. l. 34. c. 8.

The same Pliny also very much extols a Laocoon, which was in the palace of Titus, and gives it the preference to all other works of painting and sculpture. Three excellent artists, Agesander, Polydorus, and Athenodorus, Rhodians, had joined in executing it, and had made out of one stone Lacoon, his children, and the serpents in all their different folds. The work must have been admirable, if equal to the beautiful description of this fact in Virgil, or indeed if it came near it.

Ibid. l. 36. c. 5.

Æneid. l. 2.

It remains for me to draw the character of those illustrious artists who excelled so much in representing the gods and men naturally. I shall do it after Quintilian and Cicero, two admirable painters of characters and portraits, but who generally cannot be copied without being spoiled.

The

The first having enumerated the different manners in painting, he continues thus: There is the same difference also in sculpture. For the first statuaries of whom we have any account, Calon and Egesias, worked in a rude manner, and almost in the Tuscan taste. Calamis came next, and his works had less constraint in them. Those of Myron afterwards had still a more natural and easy air. Polycletus added regularity and gracefulness to them. The first place is generally given to him: however, as there is nothing entirely perfect, his statues are said to want a little more force. And indeed he represented men with infinite graces, and better than they are: but he did not entirely come up to the majesty of the gods. It is even said, that the manly age confounded his skilful hands, for which reason he scarce ever expressed any thing but tender youth. But what Polycletus wanted fell to the share of Phidias and Alcamenes. However, Phidias was judged to have represented the gods better than men. Never did an artist use ivory with so much success; if we only consider his Minerva of Athens, and his Jupiter Olympius, the beauty of which seemed to improve the religion of the beholders, so much did the work express the majesty of the god. Lysippus and Praxiteles were reckoned to have copied nature best. For, as to Demetrius, he is blamed for having carried that care to excess, and for having confined himself more to resemblance than beauty. Quintil. l. 12. c. 10.

The passage of Cicero is shorter, in which he also mentions several of the antients very little known. I observe, says he, that Canachus, in his statues, has something dry and rude. Calamis, rude as he is, has not so much of that character as Canachus. Myron does not come near enough to the just, though, strictly speaking, whatever comes from his hands is fine. Polycletus is much above them all, and in my opinion has attained perfection. Cic. in Brut. n. 70.

I have already obſerved more than once, that ſculpture is indebted to Greece for the ſupreme perfection to which it attained. The grandeur of Rome, which was to erect itſelf upon the ruins of that of Alexander's ſucceſſors, long retained the ruſtic ſimplicity of its dictators and conſuls, who neither eſteemed, nor practiſed, any arts but thoſe which were ſubſervient to war, and the occaſions of life. They did not begin to have a taſte for ſtatues, and the other works of ſculpture, till after Marcellus, Scipio, Flaminius, Paulus Emilius, and Mummius, had expoſed to the view of the Romans whatever Syracuſe, Aſia, Macedonia, Corinth, Achaia, and Bœotia, had of moſt excellent in the works of art. Rome ſaw with admiration the paintings and ſculptures in braſs and marble, with all that ſerves for the ornament of temples and public places. The people piqued themſelves upon ſtudying their beauties, diſcerning their excellencies, and knowing their value; and this kind of ſcience became a new merit, but at the ſame time the occaſion of an abuſe fatal to the republic. We have ſeen that Mummius, after the taking of Corinth, in directing the perſons who had undertaken the carriage of a great number of ſtatues and paintings of the greateſt maſters to Rome, threatened them, if they loſt or ſpoiled any of them upon the way, that they ſhould make them good at their own coſts and charges. Is not this * groſs ignorance, ſays an hiſtorian, infinitely preferable to the pretended knowledge which ſoon ſucceeded it? Strange weakneſs of human nature! Is innocence then inſeparable from ignorance, and cannot knowledge, and a taſte eſtimable in itſelf, be attained,

* Non, puto dubites, Vinici, quin magis pro rep. fuerit, manere adhuc rudem Corinthiorum intellectum, quam in tantum ea intelligi; & quin hac prudentiâ illa imprudentia decori publico fuerit convenientior. *Vell. Paterc.* l. 1. c. 23.

without

without the manners suffering thereby through an abuse, which sometimes, though unjustly, reflects reproach and disgrace upon the arts themselves?

This new taste for extraordinary pieces was soon carried to an excess. They seemed to contend, who should adorn their houses in town and country with most magnificence. The government of conquered countries supplied them with occasions of doing this. As long as their manners remained uncorrupt, the governors were not permitted to purchase any thing from the people they were set over; because, says Cicero, when the seller is not at liberty to sell things at the price they are worth, it is not a sale on his side, but a violence done to him: *Quod putabant ereptionem esse, non emptionem, cum venditori suo arbitratu vendere non liceret.* It is well known, * that these wonders of art, performed by the greatest masters, were very often without price. Nor indeed have they any other, than what the imagination, passion, and, to use Seneca's expression, the † phrensy of certain people set upon them. The governors of provinces bought what was highly esteemed for little or nothing: and these were very moderate; for most of them made their collections by force and violence.

Verr. de sign. n. 10.

History gives us instances of this in the person of Vérres, prætor of Sicily, who was not the only one that acted in this manner. He indeed carried his impudence in this point to an inconceivable excess, which Cicero § knew not by what term to express: passion, phrensy, folly, robbery! He could find

* Qui modus est in his rebus cupiditatis, idem est æstimationis. Difficile est enim finem facere pretio, nisi libidini feceris. *Verr. de sign.* n. 14.

† Corinthia paucorum furore pretiosa. *De brev. vit.* c. 12.

§ Venio nunc ad istius, quemadmodum ipse appellat, studium; ut amici ejus, morbum & insaniam; ut Siculi, latrocinium. Ego, quo nomine appellem, nescio. *Ibid.* n. 1.

no name ſtrong enough to convey the idea of it. Neither decency, ſenſe of honour, nor fear of the laws, could reſtrain him. He reckoned himſelf in Sicily as in a conquered country. No ſtatue, great or ſmall, of any value or reputation, eſcaped his rapacious hands. In a word, * Cicero affirms, that the curioſity of Verres had coſt Syracuſe more gods, than the victory of Marcellus had coſt it men.

* Sic habetote, plures eſſe a Syracuſanis iſtius adventu deos, quam victoria Marcelli homines, deſideratos. *Ibid.* n. 131.

CHAP.

CHAPTER V.

OF PAINTING.

ARTICLE I.

Of painting in general.

SECT. I.

Origin of painting.

PAINTING, like all other arts, was very groſs and imperfect in its beginnings. The ſhadow of a man marked by the outlines gave birth to it, as well as to ſculpture. The firſt manner of painting therefore derived its origin from a ſhadow, and conſiſted only in ſome ſtrokes, which multiplying by degrees formed deſign. Colour was afterwards added. There was no more than one at firſt in each draught, without any mixture; which manner of painting was called *Monochromaton*, that is to ſay, of one colour. The art at length improving every day, the mixture of only four colours was introduced: of which we ſhall ſpeak in its place. Plin. l. 35. c. 3.

I do not examine here the antiquity of painting. The Egyptians boaſt themſelves the inventors of it; which is very poſſible: but it was not they who placed it in honour and eſtimation. Pliny, in his long enumeration of excellent artiſts in every kind, and of maſter-pieces of art, does not mention one Egyptian. It was therefore in Greece, whether at Corinth, Sicyone, Athens, or in the other cities, that painting attained its perfection. It is believed to be of later date than ſculpture, becauſe Homer, Plin. ibid.

who

who often ſpeaks of ſtatues, relievo's, and carved works, never mentions any piece of painting or portrait.

Theſe two arts have many things common to both of them, but attain their end, which is the imitation of nature, by different means: Sculpture by moulding ſubſtances; Painting by laying colours upon a flat ſuperficies; and it muſt be confeſſed, that the chiſſel, in the hands of a man of genius, affects almoſt as much as the pencil. But, without pretending to eſtabliſh the precedency between theſe two arts, or to give one the preference to the other, how wonderful is it to ſee, that the artiſt's hand, by the ſtrokes of a chiſſel, can animate marble and braſs, and, by running over a canvas with a pencil and colours, imitate by lines, lights, and ſhades, all the objects of nature! If * Phidias forms the image of Jove, ſays Seneca, the god ſeems about to dart his thunder: if he repreſents Minerva, one would ſay that ſhe was going to inſtruct the beholders, and that the goddeſs of wiſdom was only ſilent out of modeſty. † Charming deluſion, grateful impoſture, which deceive without inducing error, and illude the ſenſes only to enlighten the ſoul!

* Non vidit Phidias Jovem, fecit tamen velut tonantem: nec ſtetit ante oculos ejus Minerva, dignus tamen illa arte animus, & concepit deos, & exhibuit. *Senec. Controv.* l. 5. c. 34.

† Verecundè admodum ſilent, ut hinc reſponſuras paulo minus voces præſtoleris. *Lactant.*

SECT.

SECT. II.

Of the different parts of painting. Of the Juſt in painting.

PAINTING is an art, which by lines and colours repreſents upon a ſmooth and even ſurface all viſible objects. The image it gives of them, whether of many figures together, or only of one, is called a picture, in which three things are to be conſidered, the COMPOSITION, the DESIGN, and the COLORIS, or COLOURING; which are the three eſſential parts in forming a good painter.

1. COMPOSITION, which is the firſt part of painting, conſiſts of two things, invention and diſpoſition.

Invention is the choice of the objects, which are to enter into the compoſition of the ſubject, the painter intends to treat on. It is either ſimply hiſtorical, or allegorical. Hiſtorical invention is the choice of objects, which ſimply and of themſelves repreſent the ſubject. It takes in not only true or fabulous hiſtory, but includes the portraits of perſons, the repreſentation of countries, and all the productions of art and nature. Allegorical invention is the choice of objects to repreſent in a picture, either in whole or in part, ſomething different from what they are in reality. Such, for inſtance, was the picture of Apelles, that repreſented calumny, which Lucian has deſcribed in a paſſage I ſhall repeat in the ſequel. Such was the moral piece repreſenting Hercules between Venus and Minerva, in which thoſe Pagan divinities are only introduced, to imply the attractions of pleaſure oppoſed to thoſe of virtue.

Diſpoſition very much contributes to the perfection and value of a piece of painting. For, how advantageous ſoever the ſubject may be, the invention

tion however ingenious, and the imitation of the objects chosen by the painter however just, if they are not well disposed, the work will not be generally approved. Œconomy and good order gives the whole its best effect, attracts the attention, and and engages the mind, by an elegant and prudent disposition of all the figures into their natural places. And this œconomy and distribution is called disposition.

2. The DESIGN, considered as a part of painting, is taken for the outlines of objects, for the measures and proportions of exterior forms. It regards painters, sculptors, architects, engravers, and all artists in general, whose works require beauty and proportion.

Several things are considered in the design: Correctness, good taste, elegance, character, diversity, expression, and perspective. My design is to treat on the principles of painting only so far as they may be necessary to the reader's understanding what I shall relate of the painting of the antients, and to his judging of it with some discernment and propriety.

Correctness is a term by which the painters generally express the condition of a design, when exempt from faults in its measures. This correctness depends upon the justness of proportions, and the knowledge of anatomy.

Taste is an idea either proceeding from the natural genius of the painter, or formed in him by education. Each school has its peculiar taste of design; and, since the revival of the polite arts in Europe, that of Rome has always been esteemed the best, becaused formed upon the antique. The antique is therefore the best taste of design.

Elegance of design is a manner of being that embellishes without destroying the justness of objects. This part, which is of great importance, will be treated on more at large in the sequel.

Character

Character is the proper and peculiar mark that diſtinguiſhes and characteriſes every ſpecies of objects, which all require different ſtrokes to expreſs the ſpirit of their character.

Diverſity conſiſts in giving every perſon in a picture their proper air and attitude. The ſkilful painter has the penetration to diſcern the character of nature, which varies in all men. Hence the countenances and geſtures of the perſons he paints continually vary. A great painter, for inſtance, has an infinity of different joys and ſorrows, which he knows how to diverſify ſtill more by the ages, humours, and characters of nations and perſons, and a thouſand other different means. The moſt worn-out ſubject becomes a new one under his pencil.

The word *Expreſſion* is generally confounded in the language of painting with that of Paſſion. They are however different. Expreſſion is a general term, which ſignifies the repreſentation of an object according to its character in nature, and the uſe the painter deſigns to make of it in conformity to the plan of his work. And Paſſion, in painting, is a certain geſture of the body attended with lineaments of the face, which together denote an emotion of the ſoul. So that every paſſion is an expreſſion, but not every expreſſion a paſſion.

Perſpective is the art of repreſenting the objects in a plan, according to the difference their diſtance may occaſion, either with reſpect to figure or colour. Perſpective therefore is diſtinguiſhed into two ſorts, the lineal and the aerial. The lineal perſpective conſiſts in the juſt contraction or abridgment of lines; the aerial in the juſt decreaſe or gradation of colours. This *gradual decreaſe*, in painting, is the management of the ſtrong and faint, in lights, ſhades, and tints, according to the different degrees of diſtance or remoteneſs. Mr. Perrault, out of a blind zeal for the moderns, pretended, that perſpective

ſpective was abſolutely unknown to the antients; and founded his opinion upon the want of perſpective in the column of Trajan. The Abbé Salier, in a brief but elegant diſſertation upon this ſubject, proves in many paſſages, that Perſpective was not unknown to the antients, and that it was this induſtrious artifice, which taught them to impoſe ſo happily on the ſenſes in their performances, by the modification of magnitudes, figures, and colours, of which they knew how to increaſe or diminiſh the boldneſs and luſtre. As to the column of Trajan, if Perſpective be not exactly obſerved in it, it is not through ignorance of the rules of art, but becauſe the greateſt maſters depart from, and even ſet themſelves above, all rule, for the more certain attainment of their end. Mr. de Piles owns, that the defect of gradual decreaſe or gradation in that pillar is to be aſcribed ſolely to the workman's deſign, who, ſuperior to the rules of his art, to aſſiſt the ſight, purpoſely made the objects ſtronger and more palpable.

Memoirs of the Acad. of Inſcript. Vol. VIII.

3. The COLORIS, or COLOURING, is different from colour. The latter renders the objects ſenſible to the eye. The coloris, or colouring, is one of the eſſential parts of painting, by which the painter knows how to imitate the colour of all natural objects, by a judicious mixture of the ſimple colours upon his pallet. This is a very important part. It teaches the manner in which colours are to be uſed, for producing thoſe fine effects of the *Chiaro-oſcuro (light and ſhade,)* which add boldneſs and a kind of relief to the figures, and ſhew the remoter objects in their juſt light.

Pliny explains it with ſufficient extent. After having ſpoken of the very ſimple and groſs beginnings of painting, he adds, * that, by the help of time

* Tandem ſe ars ipſa diſtinxit & invenit lumen atque umbras; differentia colorum alterna vice ſeſe excitante: poſtea deinde adjectus eſt SPLENDOR, alius hic quàm lumen; quem, quia inter hoc & umbram eſſet, appellaverunt Τόνον. *Plin.* l. 35. c. 5.

and

and experience, it gradually threw off its defects: that it discovered light and shade with the difference of the colours which set off each other; and that it made use of the Chiaro-oscuro, the shadowing, as the most exquisite degree and perfection of the coloris. For this chiaro-oscuro (light and shade, or shadowing,) is not properly light, but the mean between the lights and shades in the composition of a subject. And from thence the Greeks called it Tonos, that is, the tone of painting: to signify, that as in music, there are a thousand different tones, from the insensible union of which the harmony results; so in painting, there is an almost imperceptible force and gradation of light, which still vary, according to the different objects upon which they fall. It is by this enchanting distribution of lights and shades, and, if I may be allowed to say it, by the delusion of this kind of magic, that the painters impose upon the senses, and deceive the eyes of spectators. They employ with an art never to be sufficiently admired, all the various alloys or diminutions of colour gradually to soften and inforce the colour of objects. The progression of shade is not more exact in nature, than in their paintings.

It is this insinuating charm that strikes and attracts all mankind: the ignorant, the connoisseurs, and even painters themselves. It suffers no-body to pass by a painting that has this character with indifference, without being in a manner surprised, and without stopping to enjoy the pleasure of that surprise for some time. True painting therefore is that which in a manner calls us to it by surprising us: it is only by the force of the effect it produce, that we cannot help going to it, as if to know something it had to say to us. And when we approach it, we really find that it delights us by the fine choice and novelty of the things it presents to our view; by the history and fable it makes us call to mind; and the ingenious inventions and allegories,

gories, of which we take pleaſure either to diſcover the ſenſe, or criticiſe the obſcurity.

It does more, as Ariſtotle obſerves in his Poetics. Monſters, and dead or dying men, which we ſhould be afraid to look upon, or ſhould ſee with horror, we behold with pleaſure imitated in the works of the painters. The better the likeneſs, the fonder we are to gaze upon them. One would think, that the murder of the Innocents ſhould leave the moſt offenſive ideas in the imagination of thoſe, who actually ſee the furious ſoldiers butchering infants in the boſoms of their mothers covered with their blood. Le Brun's picture, in which we ſee that tragical event repreſented, affects us ſenſibly, and ſoftens the heart, whilſt it leaves no painful idea in the mind. The painter afflicts us no more than we are pleaſed he ſhould; and the grief he gives us, which is but ſuperficial, vaniſhes with the painting: whereas, had we been ſtruck with the real objects, we ſhould not have been capable of giving bounds, either to the violence or duration of our ſentiments.

But * what ought abſolutely to reign in painting, and conſtitutes its ſupreme excellency, is *the True.* Nothing is good, nothing pleaſes, but the True. All the arts, which have imitation for their object, are ſolely intended to inſtruct and divert mankind by a faithful repreſentation of nature. I ſhall inſert here ſome reflections upon this ſubject, which I hope will be agreeable to the reader. I have extracted them from a little treatiſe of Mr. de Piles †, upon *the True in painting*; and ſtill more, from a letter of Mr. du Guet annexed to it, which was witten to a lady, who had deſired his opinion of that ſhort tract.

* Picturæ probari non debent quæ non ſunt ſimiles veritati. *Vitr.* l. 7. c. 5.

† *M. de Piles* Cours de Peinture. *Paris edit.*

Of

Of the True in painting.

Though painting is only an imitation, and the object in the picture but feigned, it is however called *True*, when it perfectly represents the character of its model.

The True in painting is distinguished into three kinds. The simple, the ideal, and the compound or perfect True.

The Simple, which is called the first True, is a simple imitation of the expressive movements *(or affections)* of nature, and of the objects, such as they really are and present themselves immediately to the eye, which the painter has chosen for his model: so that the carnations or naked parts of an human body appear to be real flesh, and the draperies real habits, according to their diversity, and each particular object retains the true character it has in nature.

The Ideal True is the choice of various perfections, which are never to be found in a single model, but are taken from several, and generally from the antique.

The third, or Compound True, which is compounded or formed of the simple and ideal True, constitutes in that union the highest excellency of the art, and the perfect imitation of the *Fine Nature*. Painters may be said to excel according to the degree in which they are masters of the first and second True, and the happy facility they have acquired of forming out of both a good composite or compound True.

This union reconciles two things which seem opposites: to imitate nature, and not confine one's self to that imitation; to add to its beauties, and yet correct it to express it the better.

The Simple True supplies the movements *(affections or passions)* and the life. The Ideal chuses

with art whatever may embelliſh it, and render it more ſtriking; but does not depart from the Simple, which, though poor in certain parts, is rich in its whole.

If the ſecond True does not ſuppoſe the firſt, if it ſuppreſſes or prevents it from making itſelf more ſenſible than any thing the ſecond adds to it, the art departs from nature; it ſhews itſelf inſtead of her; it aſſumes her place inſtead of repreſenting her; it deceives the expectation of the ſpectator and not his eyes; it appriſes him of the ſnare, and does not know how to prepare it for him.

If, on the contrary, the firſt True, which has all the real of affection and life, but not always the dignity, exactneſs, and graces to be found elſewhere, remains without the ſupport of the ſecond True, which is always grand and perfect, it pleaſes only ſo far as it is agreeable and finiſhed, and the picture loſes every thing that was wanting in its model.

The uſe therefore of the ſecond True conſiſts in ſupplying in each ſubject what it had not, but what it might have had, and nature has diſperſed in ſeveral others; and in thus uniting what ſhe almoſt always divides.

This ſecond True, ſtrictly ſpeaking, is almoſt as real as the firſt: for it invents nothing, but collects univerſally. It ſtudies whatever can pleaſe, inſtruct, and affect. Nothing in it is the reſult of chance, even when it ſeems to be ſo. It determines by the deſign what it ſuffers to appear but once; and inriches itſelf with a thouſand different beauties in order to be always regular, and to avoid falling into repetitions.

It is for this reaſon that the union of the Simple and Ideal True have ſo ſurpriſing an effect For that union forms a perfect imitation of whatever is moſt animated, moſt affecting, and moſt perfect in nature.

All

All then is probable, becauſe all is true: but all is ſurpriſing, becauſe all is curious and extraordinary. All makes impreſſion, becauſe all has been called in that was capable of doing ſo: but nothing appears forced or affected, becauſe the natural has been choſen, in chuſing the wonderful and the perfect.

It is this fine Probable, which often appears more true than truth itſelf: becauſe in this union the firſt True ſtrikes the ſpectator, avoids various defects, and exhibits itſelf without ſeeming to do ſo.

This third True is an end to which none ever attained. It can only be ſaid, that thoſe who have come neareſt to it, have moſt excelled.

What I have ſaid hitherto of the eſſential parts of painting, will facilitate the underſtanding of what I ſhall ſoon add of the painters themſelves, in the brief account I ſhall give of them. The greateſt maſters agree, that there never was a painter who entirely excelled in all the parts of his art. Some are happy in Invention, others in the Deſign: ſome in the Coloris, others in Expreſſion: and ſome paint with abundance of grace and beauty. No one ever poſſeſſed all theſe excellencies together. Theſe talents, and many others which I omit, have always been divided: the moſt excellent painter is he who poſſeſſes the moſt of them.

To know the bent of nature is the moſt important concern. Men come into the world with a genius determined not only to a certain art, but to certain parts of that art, in which only they are capable of any eminent ſucceſs. If they quit their ſphere, they fall below even mediocrity in their profeſſion. * Art adds much to natural endowments, but does not ſupply them where they are wanting. Every thing

* Ut verè dictum eſt caput eſſe artis, decere quod facias; ita id neque ſine arte eſſe, neque totum arte tradi poteſt. *Quintil.* l. 11. c. 3.

depends on genius. The aptitude a man has received from nature to do certain things well and with eaſe, which others cannot do but very ill, though they take great pains, is called genius. * A painter often pleaſes without obſerving rules; whilſt another diſpleaſes, though he does obſerve them, becauſe the latter has not the happineſs to be born with a genius. This genius is that fire which exalts painters above themſelves, imparts a kind of ſoul to their figures, and is to them what is called ſpirit, rapture, or enthuſiaſm in poetry.

For the reſt, though a painter does not excel in all the parts of his art, it does not follow, that moſt of the works of the great maſters ſhould not be conſidered as perfect in their kind, according to the meaſure of perfection of which human weakneſs is capable. The certain proof of their excellency is the ſudden impreſſion they make alike upon all ſpectators, ignorant and ſkilful; with this ſole difference, † that the firſt only feel pleaſure in ſeeing them, and the latter know why they are pleaſed. In regard to works of poetry or painting, the impreſſion they have upon us is a judgment not to be deſpiſed. We weep at a tragedy, or at the ſight of a picture, before we reflect whether the object exhibited by the poet or painter be capable of moving us, or well imitated. The impreſſion has told us that, before we think of ſuch an inquiry. The ſame inſtinct, which at firſt ſight would draw a ſigh from us, on meeting a mother following her ſon to the grave, has a like effect, when the ſtage or a painting ſhews us a faithful repreſentation of a like event. The ‡ public therefore is capable of judging aright of

* In quibuſdam virtutes non habent gratiam, in quibuſdam vitia ipſa delectant. *Quintil.* l. 11. c. 3.

† Docti rationem artis intelligunt, indocti voluptatem. *Quintil.* l. 9. c. 4.

‡ Illud ne quis admiretur quonam modo hæc vulgus imperitorum notet, cum in omni genere tum in hoc ipſo, magna quædam eſt vis incredibiliſq; naturæ. Omnes enim tacito quodam ſenſu, ſine ulla arte

of verſes and painting; becauſe, as Cicero obſerves, all men, by the ſenſe implanted in them by nature, know, without the help of rules, whether the productions of art be well or ill executed.

The reader will not be ſurpriſed that I make a parallel here between painting and poetry. All the the world knows the ſaying of Simonides, *A picture is a ſilent poem, and a poem a ſpeaking picture.* I do not examine, which of the two ſucceeds beſt in repreſenting an object and painting an image. That queſtion would carry me too far. It has been very well treated on by the author of the critical reflections upon poetry and painting, from whom I have borrowed many things on this point. I content myſelf with obſerving, that, as a picture which repreſents an action ſhews us only the inſtant of its duration, the painter cannot expreſs many affecting circumſtances, which precede or follow that inſtant, and ſtill leſs make us ſenſible of the paſſions and diſcourſe which very much exalt their ſpirit and force: whereas a poet has it in his power to do both at his leiſure, and to give them their due extent.

It only remains for me, before I proceed to the hiſtory of the painters, to give a brief idea of the ſeveral ſpecies of painting.

SECT. III.

Different ſpecies of painting.

BEFORE the ſecret of painting in oil was diſcovered, all the painters worked either in freſco or water-colours.

Freſco is a kind of painting upon freſh plaiſter with colours mixed with water. This work was done either upon walls or arched roofs. The painting in freſco, incorporating with the plaiſter, decayed and mouldered only with it. The walls of

arte aut ratione, quæ ſint in artibus ac rationibus recta ac prava dijudicant. *Cic.* l. 3. *de orat.* n. 195.

the temple of the Dioſcuri * at Athens has been painted in freſco by Polygnotus and Diognetus, during the Peloponneſian war. Pauſanias obſerves, that theſe paintings had been well preſerved to his time, that is, almoſt ſix hundred years after Polygnotus. The good painters, however, according to Pliny, ſeldom painted in freſco. They did not think it proper to confine their works to private houſes, nor to leave their irretrievable maſter-pieces at the mercy of the flames. They fixed upon portable pieces, which, in caſe of accident, might be ſaved from the fire, by being carried from place to place. † All the monuments of thoſe great painters, in a manner, kept guard in palaces, temples, and cities, in order to be ready to quit them upon the firſt alarm; and a great painter, to ſpeak properly, was a common and public treaſure to which all the world had a right.

Painting in water-colours is a kind performed with colours, diluted only with water, and ſize, or gum.

The invention of *painting in oil* was not known to the antients. It was a Flemiſh painter, named John Van Eyck, but better known by the name of John of Bruges, who diſcovered this ſecret, and uſed it in the fifteenth century. This invention, which had been ſo long unknown, conſiſts, however, only in grinding the colours with oil of walnuts or linſeed. It has been of great ſervice to painting, becauſe all the colours, mingling better together, make the coloris or colouring more ſoft, delicate and agreeable; and give a ſmoothneſs and mellowneſs to the whole work, which it could not have in the other methods. Paintings in oil are done upon walls, wood, canvas, ſtones, and all ſorts of metals.

* *Caſtor and Pollux were ſo called, becauſe the ſons of Jupiter.*

† Omnis eorum ars urbibus excubabat, pictorque res communis terrarum erat.

It

It is said * that the antient painters painted only upon tables of wood, whitened with chalk, from whence came the word *tabula*, a picture; and that even the use of canvas amongst the moderns is of no great standing.

Pliny, after having made a long enumeration of all the colours used in painting in his time, adds, "Upon the sight of so great a variety of colours, I "cannot forbear admiring the wisdom and œcono- "my of the antients. For, with only † the four "simple and primitive colours, the painters of anti- "quity executed their immortal works, which are "to this day our admiration: the *white* of Melos, "the *yellow* of Athens, the *red* of Sinope, and the "common *black*. These are all they used, and "yet it was with these four colours, well managed, "that an Apelles and a Melanthus, the greatest "painters that ever lived, produced those wonder- "ful pieces, of which only one was of such value, "that the whole wealth of a great city was scarce "sufficient to purchase it." It is probable that their works would have been still more perfect, if to these four colours two more had been added, which are the most general and the most amiable in nature; the *blue*, which represents the heavens; and the *green*, which so agreeably cloaths and adorns the whole earth.

The antients had a manner of painting, much in use even in Pliny's time, which they called ‡*Caustic*. ‖ It was a kind of painting in wax, in which the pencil had little or no part. The whole art consisted in preparing wax of different colours, and in Plin. l. 35. c. 11.

* Nero princeps jusserit colosseum se pingi 120 pedum in linteo, incognitum ad hoc tempus. *Plin.* l. 35. c. 7.

† Quatuor coloribus solis immortalia illa opera fecere—Apelles, Melanthius.—clarissimi pictores, cum tabulæ eorum singulæ oppidorum vænirent opibus.

‡ *This word is derived from* καίειν, *which signifies* to burn.

‖ Ceris pingere, ac picturam inurere, quis primus excogitaverit, non constat. *Plin.*

applying them upon wood or ivory by the means of fire.

Miniature is a kind of painting done with ſimple and very fine colours, mixed with water and gum, without oil. It is diſtinguiſhed from other paintings by its being more delicate, requiring a nearer view, not being eaſily performed except in little, and only upon vellum, or tablets of ivory.

Paintings upon glaſs are done in the ſame manner as upon jaſper and other fine ſtones: but the beſt manner of executing it is by painting under the glaſs, that the colours may be ſeen through it. The art of incorporating the colours with the glaſs was known in former days, as may be ſeen at La Sainte Chapelle, *(our Lincoln's-Inn chapel,)* and in abundance of other Churches. This ſecret is ſaid to be loſt.

Enamel-painting. Enamel is a kind of glaſs coloured. Its principal ſubſtance is tin and lead in equal quantities, calcined in the fire; to which are added ſeparately ſuch metallic colours as it is to have. The painting and work performed with mineral colours, by the heat of the fire, is called alſo *Enamelling.* China, delft, and pots varniſhed or glazed with earth, are ſo many different kinds of *Enamel.* The uſe of *enamelling* upon earth is very antient, as veſſels enamelled with various figures were made in the time and dominions of Porſenna king of the Tuſcans.

Moſaic work is compoſed of many little pieces inlaid, and diverſified with colours and figures cemented together upon a bottom of * plaiſter of Paris. At firſt compartments were made of it to adorn cielings and floors. The painters afterwards undertook to cover walls with it, and to make various figures, with which they adorned their temples and many other edifices. They uſed glaſs and enamel in theſe

* *Or* Stucco, *a compoſition of lime and white marble powdered.*

works,

works, which they cut into an infinity of little pieces, of different ſizes and colours: theſe, having an admirable luſtre and poliſh, had all the effect at diſtance that could be deſired, and endured the inclemencies of the weather, as well as marble. This work had the advantage, in this point, of every kind of painting, which time effaces and conſumes; whereas it embelliſhes the Moſaic, which ſubſiſts ſo long, that its duration may almoſt be ſaid to have no end. There are ſeveral fragments of the antique Moſaic to be ſeen at Rome, and in ſeveral other parts of Italy. We ſhould form an ill judgment of the pencil of the antients, if we were to found it upon theſe works. It is impoſſible to imitate, with the ſtones and bits of glaſs uſed in this kind of painting, all the beauties and graces the pencil of an able maſter gives a picture.

ARTICLE II.

Brief hiſtory of the moſt famous painters of Greece.

I Propoſe to ſpeak only in this place of the moſt celebrated painters, without examining who were the firſt that uſed the pencil. Pliny, in the eighth, ninth, and tenth chapters of the thirty-fifth book of his natural hiſtory, will ſupply me with a great part of what I have to ſay. I ſhall content myſelf with obſerving this once for all, and ſhall cite him but ſeldom any more.

PHIDIAS and PANENUS.

Phidias, who flouriſhed in the 84th olympiad, A. M. was a painter before he was a ſculptor. He painted 3569. at Athens the famous Pericles, ſurnamed the Olympic, from the majeſty and thunders of his eloquence. I have ſpoken at large of Phidias in the article of ſculpture. Palenus, his brother, diſtinguiſhed himſelf

ſelf alſo amongſt the painters of his time. He painted the famous battle of Marathon, in which the Athenians defeated the whole army of the Perſians in a pitched battle. The principal officers on both ſides were repreſented in this piece as large as the life, and with exact likeneſs.

POLYGNOTUS.

Polgnotus, the ſon and diſciple of Aglaophon, was of Thaſos, an iſland in the north of the Ægean
A. M. 3582. ſea. He appeared before the 90th olympiad. He was the firſt that gave ſome grace to his figures: and contributed very much to the improvement of the art. Before him no great progreſs had been made in that part which regards expreſſion. He at firſt caſt ſome ſtatues: but at length returned to the pencil, and diſtinguiſhed himſelf by it in different manners.

But the painting which did him the moſt honour in all reſpects, was that which he performed at Athens in the * Ποικίλη, in which he repreſented the principal events of the Trojan war. However important and valuable this work was, he refuſed to be paid for it, out of a generoſity the more eſtimable as uncommon in perſons who make money of their arts. The council of the Amphictyons, who repreſented the ſtates of Greece, returned him their thanks by a ſolemn decree, in the name of the whole nation, and ordained, that in all the cities to which he ſhould go, he ſhould be lodged and maintained at the public expence. Mycon, another painter, who worked upon the ſame portico, but on a different ſide, leſs generous, and perhaps not ſo rich as Polygnotus, took money, and by that contraſt augmented the glory of the latter.

* *This was a portico, ſo called from the* variety *of the paintings and ornaments with which it was embelliſhed.*

APOL-

APOLLODORUS.

This painter was of Athens, and lived in the 93d olympiad. It was he that at laſt diſcovered the ſecret of repreſenting to the life, and in their greateſt beauty, the various objects of nature, not only by the correctneſs of deſign, but principally by the correctneſs of deſign, but principally by the perfection of the colours, and the diſtribution of ſhades, lights, and Chiaro-oſcuro; in which he carried painting to a degree of force and delicacy it had never been able to attain before. Pliny obſerves, that before him there was no painting which in a manner called upon and ſeized the ſpectator: *Neque ante eum tabula ullius oſtenditur, quæ teneat oculos.* The effect, every excellent painting ought to produce, is to fix the eyes of the ſpectator, and to attract and keep them in admiration. Pliny the younger, after having deſcribed in a very lively manner a Corinthian antique, which he had bought, and which repreſented an old man ſtanding, concludes that admirable deſcription in theſe words: "In fine, every "thing in it is of a force to engage the eyes of "artiſts, and to delight thoſe of the unſkilful." *Talia denique omnia, ut poſſit artificum oculos tenere, delectare imperitorum.* A. M. 3596. Plin. Ep. 6. l. 3.

ZEUXIS.

Zeuxis was a native of Heraclea*, and learnt the firſt elements of painting about the 85th olympiad. A. M. 3564.

* *It is not known which Heraclea authors mean, for there were ſeveral cities of that name. Some ſeem to ſuppoſe it Heraclea in Macedonia, or that in Italy near Crotona.*

Pliny

Pliny ſays *, that having found the door of painting opened by the pains and induſtry of his maſter Apollodorus, he entered without difficulty, and even raiſed the pencil, which already began to aſſume a lofty air, to a very diſtinguiſhed height of glory. *The gate of art* means here the excellency of colouring, and the practice of the Chiaro-oſcuro, light and ſhade, which was the laſt perfection painting wanted. But, as thoſe who invent do not always bring their inventions to perfection, Zeuxis, improving upon his maſter's diſcoveries, carried thoſe two excellent parts ſtill farther than him. Hence it was, that Apollodorus, exaſperated againſt his diſciple, for this ſpecies of robbery ſo honourable to him, could not forbear reproaching him with it very ſharply by a ſatire in verſe, in which he treated him as a thief, who, not content with having robbed him of his art, preſumed to adorn himſelf with it in all places as his lawful right.

All theſe complaints had no effect upon the imitator, and only ſerved to induce him to make new efforts to excel himſelf, after having excelled his maſter. He ſucceeded entirely in his endeavours, by the admirable works he performed, which at the ſame time acquired him great reputation and great riches. His wealth is not the happieſt part of his character. He made a puerile oſtentation of it. He was fond of appearing and giving himſelf great airs, eſpecially on the moſt public occaſions, as in the Olympic games, where he ſhewed himſelf to all Greece dreſſed in a robe of purple, with his name embroidered upon it in letters of gold.

When he became very rich, he began to give away his works liberally, without taking any thing for them. He gave one reaſon for this conduct,

* Ab hoc (Apollodoro) fores apertas Zeuxis Heracleotes intravit —audentemq; jam aliquid penicillum ad magnam gloriam perduxit.

which

which does no great honour to his modeſty. * *If*, ſays he, *I gave my works away for nothing, it was becauſe they were above all price.* I ſhould have been better pleaſed, if he had let others ſay ſo.

An inſcription which he affixed to one of his pieces does not argue more modeſty. It was an ATHLETA, or Wreſtler, which he could not forbear admiring, and extolling as an inimitable maſter-piece. He wrote at the bottom of it a Greek verſe, of which the ſenſe is:

† A l'aſpect du Lutteur, dans lequel je m'admire,
En van tous mes Rivaux voudront ſe tourmenter:
Ils pourront peutetre en medire
Sans pouvoir jamais l'imiter.

My WRESTLER, *when my rivals ſee,*
They hate its wond'rous charms and me;
A thouſand things perhaps they blame,
But ne'er could imitate the fame:

The Greek verſe is in Plutarch, but applied to the works of Apollodorus. It is: Plut. de glor. Athen. p. 346.

Μωμήσεταί τις μᾶλλον, ἢ μιμήσεται.

This is more eaſy to criticiſe than imitate.

Zeuxis had ſeveral rivals, of whom the moſt illuſtrious were Timanthes and Parrhaſius. The latter was competitor with him in a public diſpute, for the prizes of painting. Zeuxis, in his piece, had repreſented grapes in ſo lively a manner, that, as ſoon as it was expoſed, the birds came to peck

* Poſtea donare opera ſua inſtituit, quod ea nullo ſatis digno pretio permutari poſſe diceret. *Plin.*

† *Theſe verſes are the author's of* L'Hiſtoire de la Peinture ancienne, *extracted from the 35th book of Pliny's natural hiſtory, which he has tranſlated, or rather paraphraſed, with the Latin text. This book was printed at London in 1725. There are excellent reflections in it, of which I have made great uſe.*

at

at them. Upon which, in a tranſport of joy, and highly elated at the declaration of ſuch faithful and undeniable judges in his favour, he called upon Parrhaſius to produce immediately what he had to oppoſe to his picture. Parrhaſius obeyed, and ſhewed a painting ſeemingly covered with a fine piece of ſtuff in form of a curtain. Remove your curtain, added Zeuxis, and let us ſee this maſterpiece. That curtain was the picture itſelf, and Zeuxis confeſſed himſelf conquered. *For*, ſays he, *I only deceived the birds, but Parrhaſius has deceived me, who am myſelf a painter.*

The ſame Zeuxis, ſome time after, painted a young man carrying a baſket of grapes: and ſeeing that the birds came alſo to peck at them, he owned, with the ſame frankneſs, that if the grapes were well painted, the figure muſt be done very ill, becauſe the birds were not afraid of it.

Quintilian * informs us, that the antient painters uſed to give their gods and heroes the ſame features and characters as Zeuxis gave them, from whence he was called the Legiſlator.

Feſtus relates, that the laſt painting of this maſter was the picture of an old woman, which work made him laugh ſo exceſſively, that he died of it. It is ſurpriſing that no author ſhould mention this fact but Verrius Flaccus, cited by Feſtus. Though it is hard to believe it, ſays Mr. de Piles, the thing is not without example.

PARRHASIUS.

Parrhaſius was a native of Epheſus, the ſon and diſciple of Evenor, and as we have ſeen, the rival of Zeuxis. They were both eſteemed the moſt excellent painters of their time, which the moſt

* Hæc vero ita circumſcripſit omnia, ut cum legum latorem vocent, quia deorum & heroum effigies, quales ab eo ſunt traditæ, cæteri, tanquam ita neceſſe ſit, ſequuntur. *Quintil.* l. 12. c. 10.

glorious

glorious age of painting; and Quintilian ſays, * they carried it to an high degree of perfection, Parrhaſius for deſign, and Zeuxis for the colouring.

Pliny gives us the character and praiſe of Parrhaſius at large. If we may believe him, the exact obſervation of ſymmetry was owing to that maſter; and alſo the expreſſive, delicate and paſſionate airs of the head; the elegant diſpoſition of the hair; the beauty and dignity of features and perſon; and by the conſent of the greateſt artiſts, that finiſhing and boldneſs of the figures, in which he ſurpaſſed all that went before, and equally all that ſucceeded him. Pliny conſiders this as the moſt difficult and moſt important part of painting. For, ſays he, though it be always a great addition to paint the middle of bodies well, it is however what few have ſucceeded in. † But to trace the contours, give them their due decreaſe, and by the means of thoſe inſenſible weakenings, to make the figure ſeem as going to ſhew what it conceals; in theſe certainly the perfection of the art conſiſts.

Parrhaſius had been formed for painting by Socrates, to whom ſuch a diſciple did no little honour.

Xenophon has preſerved a converſation, ſhort indeed, but rich in ſenſe, wherein that philoſopher, who had been a ſculptor in his youth, gives Parrhaſius ſuch leſſons as ſhew, that he had a perfect knowledge of all the rules of painting.

It is agreed, that Parrhaſius excelled in what regards the characters and paſſions of the ſoul, which appeared in one of his pictures, that made abundance of noiſe, and acquired him great reputation. It was a faithful repreſentation of the PEOPLE OR GENIUS OF ATHENS, which ſhone with a thouſand

* Zeuxis atque Parrhaſius—plurimum arti addiderunt. Quorum prior luminum umbrarumque inveniſſe rationem, ſecundus examinâſſe ſubtiliùs lineas traditur. *Ibid.*

† Ambire enim debet extremitas ipſa, & ſic deſinere, ut promittat alia poſt ſe, oſtendatq; etiâm quæ occultat.

elegant

elegant and ſurpriſing beauties, had argued an inexhauſtible fund of imagination in the painter. * For intending to forget nothing in the character of that ſtate, he repreſented it, on the one ſide capricious, iraſcible, unjuſt and inconſtant; on the other, humane, merciful and compaſſionate; and with all this, proud, haughty, vainglorious, fierce; and ſometimes even baſe, timorous, and cowardly. This picture was certainly a lively ſketch of nature. But in what manner could the pencil deſcribe and group ſo many different images? There lay the Wonderful of the art. It was undoubtedly an allegorical painting.

Different authors have alſo drawn our painter to the life. He was an † artiſt of a vaſt genius and infinite fertility of invention, but one to whom none ever came near in point of preſumption, or rather in that kind of arrogance, which a glory juſtly acquired, but ill ſuſtained, inſpires ſometimes in the beſt artificers. He dreſſed himſelf in purple, wore a crown of gold; had a very rich cane, gold claſps in his ſhoes, and magnificent buſkins; in ſhort, every thing about him was in the ſame lofty ſtile. He beſtowed upon himſelf abundantly the fineſt epithets, and moſt exalted names, which he was not aſhamed to inſcribe at the bottom of his pictures; *the delicate, the polite, the elegant* Parrhaſius. *the man who carried the art to its perfection, originally deſcended from Apollo, and born to paint the gods themſelves.* He added, that, in regard to his Hercules, *he had repreſented him exactly, feature for feature, ſuch as he had often appeared to him in his dreams.* With all this ſhew and

* Pinxit & DÆMONA ATHENIENSIUM, argumento quòq; ingenioſo volebat namq; varium iracundium, injuſtum, inconſtantem; eundem vero exorabilem, clementem, miſericordem, excelſum, glorioſum, humilem, ferocem, fugacemque & omnia pariter oſtendere. *Plin.*

† Fœcundus artifex, ſed quo nemo inſolentius & arrogantiùs ſit uſus gloriâ artis. *Plin.*

vanity,

vanity, he gave himſelf out *for a man of virtue*, leſs delicate in this point than Mr. Boileau, who called himſelf.

Ami de la vertu, plutot que vertueux.
The friend of virtue, rather than virtuous.

The event of his diſpute with Timanthes, in the city of Samos, muſt have humbled him extremely, and not a little mortified his ſelf-love. He that ſucceeded beſt in a ſubject was to have a prize. This ſubject was an Ajax enraged againſt the Greeks, for having adjudged the arms of Achilles to Ulyſſes. Upon this occaſion, by the majority of the beſt judges, Timanthes was declared victor. Parrhaſius covered his ſhame, and comforted himſelf for his defeat, with a ſmart ſaying, which ſeems to ſavour a little of rodomontade. *Alas poor hero!* ſaid he, *his fate affects me more than my own. He is a ſecond time overcome by one of leſs merit than himſelf.*

Pamphilus.

Pamphilus was a native of Amphipolis, upon the borders of Macedonia and Thrace. He was the firſt that united erudition with painting. He confined himſelf to mathematics, and more eſpecially to arithmetic and geometry; maintaining ſtrongly, that without their aid it was impoſſible to carry painting to its perfection. It is eaſy to believe, that ſuch a maſter would not make his art cheap. He took no diſciple under ten talents (ten thouſand crowns) for ſo many years, and it was at that price Melanthus and Apelles became his ſcholars. He obtained, at firſt at Sicyone, and afterwards throughout all Greece, the eſtabliſhment of a kind of academy, in which the children of free condition, that were inclined to the polite arts, were carefully edu-

cated and instructed. And lest painting should come to degenerate, and grow into contempt, he obtained farther from the states of Greece a severe edict to prohibit the use of it to slaves.

The excessive price paid by disciples to their masters, and the institution of academies for free persons, with the exclusion of slaves, shew how highly this art was esteemed, with what emulation they applied to it, and with what success and expedition it must have attained its perfection.

A. M. 3604. Zeuxis, Parrhasius, Melanthus, and Pamphilus, were cotemporaries, and lived about the 95th olympiad.

TIMANTHES.

Timanthes, according to some, was of Sicyone; and, according to others, of Cythnus, one of the Cyclades. His particular character was * invention. This part so rare and difficult, is acquired neither by industry nor the advice and precepts of masters: it is the effect of an happy genius, a lively imagination, and that noble fire which animates painters as well as poets with a kind of enthusiasm.

Plin. l. 35. Quintil. l. 2. c. 13. Val. Max. l. 8. c. 11. The Iphigenia of Timanthes, celebrated by so many writers, was looked upon as a master-piece of the art in its kind, and occasioned its being said, that his works made those who saw † them conceive more than they expressed, and that though art in them rose to its highest degree of perfection, genius still transcended it. The subject was fine, grand, tender, and entirely proper for painting: but the execution gave it all its value. This piece represented Iphiginia standing before the altar, as a young

* Timanthi plurimum adfuit ingeni. *Plin.*

† In omnibus ejus operibus intelligitur plus semper, quam pingitur; & cum ars summa sit, ingenium tamen ultra artem est. *Plin.* l. 35. c. 10.

and

and innocent princeſs, upon the point of being ſacrificed for the preſervation of her country. She was ſurrounded by ſeveral perſons, all of them ſtrongly intereſted in this ſacrifice, though in different degrees. The painter * had repreſented the prieſt Chalchas in great affliction, Ulyſſes much more ſad, and Menelaus the victim's uncle, with all the grief it was poſſible for a countenance to expreſs: Agamemnon, the princeſs's father, ſtill remained. All the lineaments of ſorrow were however exhauſted. Nature was called in to the ſupport of art. It is not natural for a father to ſee his daughter's throat cut: it ſufficed for him to obey the gods who required it, and he was at liberty to abandon himſelf to all the exceſs of ſorrow. The painter not being able to expreſs that of the father, choſe to throw a veil over his face, leaving the ſpectator to judge of what paſſed in his heart: *Velavit ejus caput, & ſuo cuique animo dedit æſtimandum.*

This idea is finely conceived, and does Timanthes great honour. It is not known, however, whether he was the real auther of it, and it is probable that the Iphigenia of Euripides ſupplied him with it. The paſſage ſays: *When Agamemnon ſaw his daughter led into the grove to be ſacrificed, he groaned, and turning away his head wept, and covered his face with his robe.*

One of our own illuſtrious painters, Le Pouſſin, has happily imitated the ſame circumſtance, in his picture of the death of Germanicus. After having treated the different kinds of affliction of the other perſons, as paſſions capable of being expreſſed, he places on the ſide of Germanicus's bed, a woman

* Cum in Iphigeniæ immolatione pinxiſſet trieſtem Colchantem, triſtiorem Ulyſſem addidiſſet Menelao, quem ſummam poterat ars efficere mærorem; conſumptis affectibus, non reperiens quo digne modo patris vultum poſſet exprimere, velavit ejus caput, & ſuo cuiq; animo dedit æſtimandum. *Quintil.* l. 2. c. 13.

remarkable for her mien and habit, who hides her face with her hands, whilſt her whole attitude exceſſive grief, and clearly intimates, that ſhe is the wife of the prince whoſe death they are lamenting.

I cannot help adding in this place a very curious fact in relation to allegorical painting. A picture, in which a fiction and an emblem are uſed to expreſs a real action, is ſo called.

The prince of Conde had the hiſtory of his father, known in Europe by the name of the Great Conde, painted in his gallery at Chantilly. There was a great inconvenience to get over in the execution of this project. The hero, during his youth, had been engaged in intereſt with the enemies of the ſtate, and had done great part of his exploits, whilſt he did not carry arms for his country. It ſeemed neceſſary therefore not to diſplay this part of his warlike actions in the gallery of Chantilly. But, on the other ſide, ſome of his actions, as the relief of Cambray, and the retreat before Arras, were ſo glorious, that it muſt have been a great mortification to a ſon ſo paſſionate for his father's renown, to have ſuppreſſed them in the monument he erected to the memory of that hero. The prince himſelf diſcovered an happy evaſion: for he was not only the prince, but the man of his time, to whom nature had given the moſt lively conceptions, and the moſt ſhining imaginations. He therefore cauſed the muſe of hiſtory to be deſigned, an allegoric but well known perſon, holding a book, upon the back of which was written, *Life of the prince of Conde.* That muſe tore leaves out of the book which ſhe threw upon the ground, and on thoſe leaves were inſcribed, *Relief of Cambray, relief of Valenciennes, retreat before Arras:* in ſhort, the title of all the great actions of the prince of Conde, during his ſtay in the Netherlands; all very ſhining exploits, with no other exception than the ſervice in which they were done. The piece unhappily was not executed according to ſo elegant

and

and ſimple an idea. The prince, who had conceived ſo noble a plan, had, upon this occaſion, an exceſs of complaiſance, and paying too great a deference to art, permitted the painter to alter the elegance and ſimplicity of his thought by figures, which render the painting more uniform, but make it convey nothing more than he had already imaged in ſo ſublime a manner. I have extracted this account from the critical reflections upon poetry and painting.

APELLES.

Apelles, whom fame has placed above all other painters, appeared at length in the 112th olympiad. He was the ſon of Pithius, of the iſland of * Cos, and the diſciple of Pamphilus. He is ſometimes called an Epheſian, becauſe he ſettled at Epheſus, where, without doubt, a man of his merit, ſoon obtained the freedom of the city. Plin. l. 35, c. 10. A. M. 3672.

He had the glory of contributing more in his own perſon than all the other painters together, to the perfection of the art, not only by his excellent works, but by his writings, having compoſed three volumes upon the principal ſecrets of painting, which ſubſiſted in the time of Pliny, but unfortunately are not come down to us.

His chief excellency lay in the GRACES, that is to ſay, ſomething free, noble, and at the ſame time beautiful, which moves the heart, whilſt it informs the mind. When he praiſed and admired the works of others, which he did very willingly; after having owned, that they excelled in all the other parts, he added, that they wanted grace; but that as to himſelf, that quality had fallen to his ſhare; which praiſe no body could diſpute with him. A pardonable ingenuity in men of real merit, when not proceeding from pride and arrogance.

* *Iſle in the Ægean ſea.*

The manner in which he came acquainted and contracted a friendſhip with Protogenes, a celebrated painter of his time, is curious enough, and worth relating. Protogenes lived at Rhodes, known only to Apelles by reputation and the fame of his works. The latter, deſiring to be aſſured of their beauty by his own eyes, made a voyage expreſsly to Rhodes. When he came to Protogenes's houſe, he found no body at home, but an old woman who took care of the place where he worked, and a canvas on the eaſel, on which there was nothing painted. Upon the old woman's aſking his name, I am going to ſet it down, ſays he: and taking a pencil with colour, he deſigned ſomething in a moſt exquiſite taſte. Protogenes, on his return, being informed of what had paſſed by the ſervant, and conſidering with admiration what he ſaw deſigned, was not long before he gueſſed the author. *This is Apelles*; cried he, *there is no man in the world capable of ſo fine and delicate a deſign beſides himſelf.* Taking another colour, he drew a contour upon the ſame lines ſtill more correct and admirable, and bade his houſe-keeper, if the ſtranger returned, ſhew him what he had done, and tell him that it was the work of the man he came to enquire for. Apelles came again ſoon after: but being aſhamed to ſee himſelf excelled by his rival, he took a third colour, and amongſt the ſtrokes already done, introduced others of ſo ſublime and wonderful a nature, as entirely exhauſted all that was moſt refined and exquiſite in the art. When Protogenes perceived theſe laſt ſtrokes; *I am overcome*, ſaid he, *and fly to embrace my conqueror.* Accordingly he ran to the port, where finding Apelles, they contracted a ſtrict friendſhip, which continued ever after: a circumſtance ſomething extraordinary between perſons of the greateſt merit in the ſame way. They agreed between them, in regard to the painting in which they had tried their ſkill with each other, to leave

leave it to posterity as it was, without touching it any more, rightly foreseeing what really came to pass, that it would one day prove the admiration of the whole world, and particularly of the connoisseurs and masters of the art. But this precious monument of the two greatest painters that ever were, was reduced to ashes, when the house of Augustus, in the Palatium, was first burnt; where it was exposed to the curiosity of spectators, always surprised, in the midst of a multitude of other most exquisite and finished paintings, to find in this only a kind of void space, by so much the more admirable, as it had only the outlines of three designs in it of the most perfect beauty, scarce visible through their smallness, and for that reason still the more valuable and the more attractive of the most judicious eyes.

It is almost in this sense the passage of Pliny is to be understood, where he says, *arrepto penicillo lineam ex colore duxit summæ tenuitatis per tabulam*; by *lineam* he does not mean a simple geometrical line, but a stroke of the pencil in an exquisite taste. The other notion is contrary to common sense, says Mr. de Piles, and shocks every body that has the least idea of painting.

Though Apelles was very exact in his works, he knew how far it was necessary to take pains without tiring his genius, and did not carry his exactitude to the utmost scruple. * He said one day of Protogenes, that he confessed that rival might equal, or even excel him in every thing else, but *did not know when to take off the pencil*, (that is to say, to have done;) and that he often spoiled the fine things he did, by endeavouring to give them an higher

* Idem & aliam gloriam usurpavit cum Protogenis opus immensi laboris ac curæ supra modum anxiæ, miraretur. Dixit enim omnia sibi cum illo paria, aut illi meliora; sed uno se præstare, quod manum ille de tabula non sciret tollere; memorabili præcepto, nocere sæpe nimium diligentiam. *Plin.*

degree of perfection. A reflection worth nothing, says Pliny, and which shews that a too scrupulous exactitude often becomes prejudicial.

Apelles did not say this because he approved negligence in those who applied themselves to painting. He was of a quite different opinion, both with regard to himself and others. He passed no day of his life, whatever other affairs he might have to transact, without exercising himself either in craions, with the pen, or the brush, as well to preserve the freedom and facility of his hand, as to improve his perfection in all the refinements of an art, that has no bounds.

One of his disciples shewing him a draught for his own opinion of it, and telling him, that he had done it very fast, and in a certain space of time: *I see that very plain*, says he, *without your telling it me, and am surprised that in so short a time you did no more of this kind.*

Another painter shewing him the picture of an Helen, which he had drawn with care, and adorned with abundance of jewels, he told him: *Not being able to make her beautiful, friend of mine, you were resolved at least to make her rich.*

If he spoke his own opinion with simplicity, he took that of others in the same manner. His custom was, when he had finished a work, to expose it to the eyes of such as passed by, and to hear what was said of it behind a curtain, with design to correct the faults they observed in it. A shoemaker having perceived something wanting in a sandal, said so freely; and the criticism was just. The next day passing the same way he saw the fault corrected. Proud of the good success of his remark, he thought fit to censure also a leg, to which there was nothing to object: the painter then came from behind the screen, and bade the shoe-maker keep to his trade and his sandals: Which gave

birth

birth to the proverb, *Ne ſutor ultra crepidam*; that is,

Let not the cobler go beyond his laſt.

Apelles took pleaſure in doing juſtice to the merit of great maſters, and was not aſhamed to prefer them to himſelf in ſome qualities. Thus he confeſſed ingenuouſly that Amphion excelled him in diſpoſition, and Aſclepiodorus in the regularity of deſign. We have ſeen his judgment in favour of Protogenes. Nor did he confine himſelf to mere words.

That excellent painter was in no great eſteem with his own country. Whilſt Apelles was with him at Rhodes, he aſked him what he would take for his works when finiſhed, and the other having ſet a very moderate price on them: *and for me*, replied Apelles, *I offer you *fifty talents for each of them, and will take them all that price*; adding, that he ſhould eaſily get them off, and would ſell them all as his own. This offer, which he made in earneſt, opened the eyes of the Rhodians to the merit of their painter; who, on his ſide, made the beſt of it, and would not ſell any more of his pictures but at a very conſiderable price.

His ſupreme excellency in painting was not the only merit of Apelles. Polite learning, knowledge of the world, and his affable, inſinuating, elegant behaviour, made him highly agreeable to Alexander the Great, who did not diſdain to go often to the painter's houſe, as well to enjoy the charms of his converſation, as to ſee him work, and to be the firſt witneſs of the wonders performed by his pencil. This affection for a painter, who was polite, agreeable, and full of wit, is not a matter of wonder. A young monarch eaſily grows fond of

* *Fifty thouſand crowns. This ſum ſeems exorbitant. It is common enough to meet with errors in cyphers.*

a genius

a genius of this kind, who, with the goodneſs of his heart, unites the beauty of his mind, and the delicacy of his pencil. This ſort of familiarity between heroes of different characters, is not uncommon, and does honour to the greateſt princes.

Alexander had ſo high an idea of Apelles, that he publiſhed an edict to declare, that it was his will that no other perſons ſhould paint him; and by the ſame edict granted permiſſion to none but Pyrgoteles to cut the dies for his medals, and Lyſippus to repreſent him in caſt metals.

Plut. de amic. & adulat. p. 58.

It happened that one of the principal of Alexander's courtiers being one day with Apelles, whilſt he was painting, he vented abundance of injudicious queſtions and reflections upon painting, as is common with thoſe who talk of what they are ignorant. Apelles, who had no reaſon to apprehend any thing from explaining himſelf freely to the greateſt lords, ſaid to him, "Do you ſee thoſe boys "that are grinding my colours? Whilſt you were "ſilent they admired you, dazzled with the ſplen- "dor of the purple and gold with which your ha- "bits glitter. But ever ſince you began to talk of "what you don't underſtand, they have done no- "thing but laugh." Plutarch relates this. According to Pliny *, Apelles ventured to reprove Alexander himſelf in this manner, though in ſofter terms, adviſing him only to expreſs himſelf with more reſerve before his workmen: ſuch an aſcendant had the witty painter acquired over a prince, who was at that time the terror and admiration of the world, and naturally very warm. Alexander gave him ſtill more extraordinary proofs of his affection and regard.

Plin. l. 35. c. 10.

* In officina imperite multa diceret: ſilentium comiter ſuadebat, riderium eum dicens a pueris qui colores tererent. Tantum auctoritatis & juris erat ei in regem, alioquin iracundum.

The

The ſimple and open character of Apelles was not equally agreeable to all the generals of that young monarch. Ptolemy, one of them, to whom Egypt was afterwards allotted, was not of the number of thoſe that affected our painter moſt: for what reaſon hiſtory does not ſay. However it was, Apelles having embarked, ſometime after the death of Alexander, for a city of Greece, was unfortunately thrown by a tempeſt upon the coaſt of Alexandria, where the new king made him no reception. Beſides this mortification, which he expected, there were ſome perſons, that envied him, malicious enough to endeavour to embroil him much more. With this view, they engaged one of the officers of the court to invite him to ſup with the king, as from himſelf; not doubting but ſuch a liberty, which hewould ſeem to take of himſelf, would draw upon him the indignation of a prince, who did not love, and knew nothing of this little knaviſh trick. Accordingly, Apelles went to ſupper out of deference, and the king, highly offended at his preſumption, aſked him fiercely, which of his officers had invited him to his table; and ſhewing him his uſual invitors, he added, that he would know which of them had occaſioned him to take ſuch a liberty. The painter, without any emotion, extricated himſelf from this difficulty like a man of wit, and a conſummate deſigner. He immediately took a piece of charcoal out of a chafing-diſh, in the room, and with three or four ſtrokes upon the wall, ſketched the perſon that had invited him, to the great aſtoniſhment of Ptolemy, who from the firſt lines knew the face of the impoſtor. This adventure reconciled him with the king of Egypt, who afterwards loaded him with wealth and honours.

But this did not reconcile him with envy, which only became the more violent againſt him. He was Lucian. de Calumn. p. 563—585.

was accuſed, ſome time after, before that prince, of having entered with Theodotus * into the conſpiracy formed againſt him in the city of Tyre. The accuſer was another painter of reputation, named Antiphilus. There was not the leaſt probability in the charge. Apelles had not been at Tyre; had never ſeen Theodotus; and was neither of a character nor profeſſion to be concerned in ſuch affairs: the accuſer, who was alſo a painter, though very inferior to Apelles to merit and reputation, might, without injury, be ſuſpected of jealouſy in point of art. But the prince, without hearing or examining any thing, as is too common, taking it for granted that Apelles was criminal, reproached him warmly with his ingratitude, and badneſs of heart; and he would have been carried to execution, but for the voluntary confeſſion of one of the accomplices; who, touched with compaſſion upon ſeeing an innocent man upon the point of being put to death, confeſſed his own guilt, and declared that Apelles had no ſhare in the conſpiracy. The king, aſhamed of having given ear to calumny ſo haſtily, reinſtated him in his friendſhip, gave him an hundred talents, to make him amends for the wrong he had done him, with Antiphilus to be his ſlave.

An hundred thouſand crowns.

Apelles, on his return to Epheſus, revenged himſelf upon all his enemies by an excellent picture of calumny, diſpoſed in this manner. Upon the right of the piece ſate a man of conſiderable authority with great ears, not unlike thoſe of Midas, holding out his hand to calumny, to invite her to approach him. On each ſide of him ſtood a woman, one of whom repreſented *Ignorance*, and the other *Suſpicion*.

ὑποψία.

Calumny ſeems to advance in the form of a woman of exquiſite beauty. There is however to be diſ-

* *Lucian is taxed with a very groſs anachroniſm in regard to this fact.*

cerned

cerned in her aſpect and mein an air of violence and fierceneſs, like one actuated by anger and fury. In one hand, ſhe holds a torch to kindle the fire of diſcord and diviſion; and with the other ſhe drags a young man by the hair, holding up his hands to heaven, and imploring the aſſiſtance of the gods. Before her goes a man with a pale face, a withered lean body, and piercing eyes, who ſeems to lead the band: this was * Envy, Calumny is attended by two other women, who excite, animate, and buſy themſelves about her, to exalt her charms and adjuſt her attire. By their wary and compoſed air theſe are eaſily conjectured to be FRAUD and TREACHERY. At diſtance behind all the reſt follows REPENTANCE, cloathed in a black torn habit, who looking back with abundance of confuſion and tears, ſees afar off TRUTH advancing ſurrounded with light. Such was the uſeful and ingenious revenge of this great man. I do not believe it would have been ſafe for him, during his ſtay in Egypt, to have drawn, or at leaſt expoſed, ſuch a painting. Thoſe great ears, that hand extended to invite the approach of Calumny, and the like ſtrokes, do no honour to the principal character, and expreſs a prince ſuſpicious, credulous, open to fraud, who ſeems to invite accuſers.

Pliny makes a long enumeration of the paintings of Apelles. That of Antigonus † is of the moſt famous. This prince had but one eye, wherefore he drew him turning ſideways, to hide that deformity. He is ſaid to have been the firſt that diſcovered the profile.

He drew a great many pictures of Alexander, one of which was looked upon as the moſt finiſhed of his works. He was repreſented in it with thunder in his hand. This picture was done for

* *Envy, in the Greek, is maſculine:* φθόνος.

† Habet in pictura ſpeciem tota facies. Apelles tamen imaginem Antigoni latere tantum altero oſtendit, ut amiſſa oculi deformitas lateret. *Quintil.* l. 2. c. 13.

the

the temple of Diana at Epheſus. The hero's hand with the thunder in it, ſays Pliny, who had ſeen it, ſeem actually projected from the piece. And that prince himſelf ſaid, that he reckoned two Alexanders, the one of Philip, who was invincible; the other of Apelles, that was inimitable.

Pliny mentions one of his paintings, which muſt have been of ſingular beauty. He made it for a public diſpute between the painters: the ſubject given them to work upon was a mare. Perceiving that intrigue was upon the point of adjudging the prize to one of his rivals, * he appealed from the judgment of men to that of mute animals, more juſt than men. He cauſed the pictures of the other painters to be ſet before horſes brought thither for that purpoſe; they continued without motion to all the other pieces, and did not begin to neigh till that of Apelles appeared.

His Venus, called *Anadyoméne*, that is to ſay, riſing from the ſea, was his maſter-piece. Pliny† ſays, that this piece was celebrated by the verſes of the greateſt poets, and that if the painting was excelled by the poetry, it was alſo made illuſtrious by it. Apelles had made another at Cos, his native country, which in his own opinion, and that of all judges, would have excelled the firſt; but invidious death put a ſtop to the work when half executed. No body afterwards would preſume to put pencil to it. It is not known, whether it was this ſecond Venus, or the firſt, that Auguſtus bought of the people of Cos, by diſcharging them of the tribute of an hundred talents, laid on them by the Roman republic. If it were the ſecond, as is very likely, it had as bad a fate, and ſtill worſe than the firſt. In the time of Auguſtus, the damp had begun to ſpoil the lower part of it. Enquiry was made by that prince's order for ſomebody to

Strab. l. 14. p. 657.

An hundred thouſand crowns.

* Quo judicio ad mutas quadrupedes provocavit ab hominibus.

† Verſibus græcis tali opere, dum laudatur, victo, ſed illuſtrato,

retouch

retouch it; but there was none bold enough to undertake it, which * augmented the glory of the Greek painter, and the reputation of the work itself. This fine Venus, which no one dared to retouch, out of veneration and awe, was insulted by the worms, that got into the wood, and devoured it. Nero, who reigned then, caused another to be set up in its place, done by a painter of little note. *Dorotheus.*

Pliny observes to the reader, that all these wonderful paintings, which were the admiration of all mankind, were painted only with the four primitive colours, of which we have spoke.

Apelles brought up several disciples, to whom his inventions were of great advantage: but, says Pliny, he had one secret which nobody could ever discover, and that was the composition of a certain varnish, which he applied to his paintings, to preserve them during a long series of ages, in all their freshness and spirit. There were three advantages in the use of this varnish: 1. It gave a lustre to every kind of colour: and made them more mellow, smooth and tender: which is now the effect of oil. 2. It preserved his works from dirt and dust. 3. It * helped the sight of the spectator which is apt to dazzle, in softening the strength of the most lively colours, by the interposition of this varnish, which served instead of glasses to his works.

ARISTIDES.

One of the most famous cotemporaries of Apelles was Aristides the Theban. He did not indeed possess the elegance and graces in so high a degree

* Ipsa injuria cessit in gloriam artificis.

† Ne claritas colorum, oculorum aciem offenderet——& eadem res minis floridis coloribus austeritatem occultè daret, *Plin.*

as

as Apelles: * but was the firſt, that by genius and application eſtabliſhed unerring rules for expreſſing the ſoul, that is to ſay, the inmoſt workings of the mind. He excelled as well in the ſtrong and vehement, as the ſoft and tender paſſions: but his colouring had ſomething harſh and ſevere in it.

The admirable piece † was his (ſtill in Pliny's words) in which, in the ſtorming of a town, a MOTHER is repreſented expiring by a wound ſhe has received in her boſom, and an INFANT creeping to ſuck at her breaſt. In the viſage of this woman, though dying, there appears the warmeſt ſentiments, and the moſt paſſionate ſolicitude of the maternal tenderneſs. She ſeems to be ſenſible of her child's danger, and at the ſame time to be afraid, that inſtead of her milk ſhe ſhould find only blood. One wodld think Pliny had the pencil in his hand, he paints all he deſcribes in ſuch lively colours Alexander, who was ſo fond of whatever was fine, was ſo enamoured of this piece, that he cauſed it to be taken from Thebes, where it was, and carried to Pella, the place of his birth, at leaſt ſo reputed.

The ſame perſon painted alſo the battle of the Greeks with the Perſians, wherein, within a ſingle frame, he introduced an hundred perſons ‡ at a thouſand drachmas (about twenty-four pounds) each figure, by an agreement made between him and the tyrant Mnaſon, who reigned at that time at Elatæa in Phocis. I have ſpoke elſewhere of a Bacchus, which was reckoned the maſter-piece of Ariſtides, and was found at Corinth, when that city was taken by Mummius.

* Is omnium primus animum pinxit & ſenſus omnes expreſſit. *Plin.*

† Hujus pictura eſt, oppido capto ad matris morientis è vulnere mammam adrepans infans; intelligiturque ſentire mater & timere, hę, e mortuo lacte ſanguinem lambat.

‡ *The text ſays*, ten minæ. *The mina is worth an hundred drachmas, and the drachma ten ſols.*

He

He was so excellent in expressing the languor of the body or mind, that Attalus, who was a great connoisseur of things of this kind, made no scruple to give an hundred talents for one of his paintings, wherein only something of this nature was expressed: Only riches as immense as those of Attalus, which became a proverb, *(Attalicis Conditionibus)* could make so exorbitant a price for a single picture probable. *An hundred thousand crowns.*

PROTOGENES.

Protogenes was of the city of Caunus, upon the southern coast of the island of Rhodes, on which it depended. He employed himself at first only in painting ships, and lived a great while in extreme poverty. Perhaps that might be of no prejudice to him; for poverty often induces men to take pains, and is the* sister, or rather mother of invention and capacity. By the works he was employed to do at Athens, he became the admiration of the most discerning people in the world.

The most famous of his paintings was the JALYSOS; he was an hunter, son or grandson of the Sun, and founder of Rhodes. What was most admired in this piece was the froth at the dog's mouth. I have related this circumstance at length, in speaking of the siege of Rhodes. Plin. l. 35. c. 10. Aul. Gell. l. 15. c. 31. Plut. in Demetr. p. 898. Vol. VII.

Another very celebrated picture of Protogenes, was the satyr leaning against a pillar. He executed it at the very time Rhodes was besieged; wherefore it was said to have been *painted under the sword.* At first there was a partridge perched upon the pillar. But because the people of the place, when it was first exposed, bestowed all their attention and admiration upon the partridge, and said nothing of the Strab. l. 14. p. 652.

* Nescio quomodo bonæ mentis soror est paupertas. *Petron.*

ſatyr, which was much more admirable; and the tame partridges, brought where it was, called, upon the ſight of that upon the pillar, as if it had been a real one; the painter, offended at that bad taſte, which in his opinion was an injury to his reputation, deſired leave of the directors of the temple, in which the painting was conſecrated, to retouch his work; which being granted, he ſtruck out the partridge.

He alſo painted the mother of Ariſtotle, his good friend. That celebrated philoſopher, who during his whole life cultivated the polite arts and ſciences, highly eſteemed the talents of Protogenes. He even wiſhed, that he had applied them better than in painting hunters or ſatyrs, or in making portraits. And, accordingly he propoſed to him, as a ſubject for his pencil, the battles and conqueſts of Alexander, as very proper for painting, from the grandeur of ideas, elevation of circumſtances, variety of events, and immortality of facts. But a certain peculiar taſte, a natural inclination for more calm and grateful ſubjects, determined him to works of the kind I have mentioned. All that the philoſopher could obtain of the painter, at laſt, was the portrait of Alexander, but without a battle. It is dangerous to make excellent artiſts quit their taſte and natural talent.

PAUSIAS.

Pauſias was of Sicyone. He diſtinguiſhed himſelf particularly by that kind of painting called *Cauſtic*, from the colours being made to adhere either upon wood or ivory, by the means of fire. Pamphilus was his maſter in this art, whom he far excelled in it. He was the firſt that adorned arches and cielings with paintings of this kind. There were many conſiderable works of his doing. Pauſanias

fanias ſpeaks of a DRUNKENNESS; ſo well painted, ſays he, that all the features of her ruddy face may be diſtinguiſhed through a large glaſs ſhe is ſwilling.

The courtezan * Glycera, of Sicyone alſo, excelled in the art of making wreaths, and was looked upon to be the inventreſs of them. Pauſias, to pleaſe and imitate her, applied himſelf alſo in painting flowers. A fine diſpute aroſe betwixt art and nature, each uſing their utmoſt endeavours to carry the prize from their competitor, without its being poſſible to adjudge the victory to either.

Pauſias paſſed the greateſt part of his life at Sicyone, his country, which was in a manner the nurſing mother of painters and painting. It is true, that this city being ſo much indebted, in the latter times, that all the public and private paintings were pledged for large ſums of money, M. Scaurus, Sylla's ſon-in-law by his mother Metella, with deſign to immortalize his edileſhip, paid all the creditors, and took out of their hands all the paintings of the moſt famous maſters, and amongſt the reſt thoſe of Pauſias, carried them to Rome, and ſet them up in the famous theatre, which he cauſed to be erected to the height of three ſtories, all ſupported by magnificent pillars of thirty feet high, to the number of three hundred and ſixty, and embelliſhed with ſtatues of marble and bronze, and with antique pieces of the greateſt painters. This theatre was to continue only during the celebration of the games. Pliny ſays of this edileſhip, that it compleated the ſubverſion of the manners of the Roman citizens. *Cujus (M. Scauri) neſcio an Ædi-*

* Amavit in juventa Glyceram municipem ſuam, inventricem coronarum: certandoque imitatione ejus, ad numeroſiſſimam florum varietatem perduxit artem illam——cum opera ejus picturâ imitaretur, & illa provocans variaret, eſſetque certamen artis ac naturæ. *Plin.* l. 35. c. 11. & l. 21. c. 3.

litas maximè proſtraverit mores civiles; and he goes ſo far as to add, that it did more prejudice to the republic, than the bloody proſcription of his father-in-law Scylla, that cut off ſo many thouſand Roman citizens.

Nicias of Athens diſtinguiſhed himſelf very much amongſt the painters. There were abundance of his pictures in exceeding eſtimation; amongſt others, that wherein he had drawn Ulyſſes's deſcent into hell, called νεκυια, Attalus, or rather, according to Plutarch, Ptolomy, offered him for this picture ſixty talents, (ſixty thouſand crowns) which ſeems almoſt incredible: but he refuſed them, and made it a preſent to his country. He laboured upon this piece with ſuch application, that he often forgot the time of the day, and would aſk his ſervant, *Have I dined?* * When Praxiteles was aſked upon which of his works of marble he ſet the higheſt value, he anſwered, *That to which Nicias has ſet his hand.* He meant by that the excellent varniſh added by that painter to his marble ſtatues, which exalted their beauty.

I ſhall not mention abundance of other great painters, not ſo well known, nor ſo illuſtrious as thoſe I have ſpoken of, who did ſo much honour to Greece.

It is very unfortunate that none of their works have come down to us, and that we are not capable of judging of their merit by our own eyes. We have it in our power to compare the antique ſculpture of the Greeks with our own, becauſe we are certain that we ſtill have maſter-pieces of it, that is to ſay, the fineſt works of that kind antiquity produced. The Romans, in the age of their greateſt ſplendor, which was that of Auguſtus, diſputed

* Hic eſt Nicias de quo dicebat Praxiteles interrogatus quæ maximè opera ſua probaret in marmoribus: Quibus Nicias manum admoviſſet; tantum circumlitioni ejus tribuebat. *Plin.* l. 35. c. 11.

with

with the Greeks only ability in the art of government. They acknowledged them their maſters in all others, and expreſsly in that of ſculpture:

Excudent alii ſpirantia molliùs æra
Credo equidem; vivos ducent de marmore vultus.
Tu regere imperio populos, Romane, memento:
Hæ tibi erunt artes. Virg. Æneid. l. 6.

What I have related of Michael Angelo, who preferred the Cupid of Praxiteles ſo much to his own, is an evident proof, that the modern can, no more than the antient Rome, diſpute ſculpture with the Greeks.

We cannot judge in the ſame manner of the excellency of the antient painters. That queſtion is not to be decided from mere relations. To underſtand that, it were neceſſary to have their pieces to compare with each other, and with ours. Theſe we want. There are ſtill ſome antique Moſaic paintings at Rome; but few done with the pencil, and thoſe in bad condition. Beſides which, what remains, and was painted at Rome upon the walls, were not done till long after the death of the celebrated painters of Greece.

It muſt, however, be owned, that, every thing conſidered, the prejudices are extremely in favour of antiquity, even in regard to painting. In the time of Craſſus, whom Cicero introduces as a ſpeaker, in his books *de Oratore*, people could never ſufficiently admire the works of the antient painters, and were ſoon tired with thoſe of the moderns; becauſe in the former there was a taſte of deſign and expreſſion, that perpetuated the raptures of the connoiſſeurs, and in the latter ſcarce any thing to be found, but the variety of the colouring. "I "do not know, ſays Craſſus*, how it happens, "that

* Difficile dictu eſt, quæ nam cauſa ſit cur ea, quæ maximè ſenſus noſtros impellunt voluptate & ſpecie prima acerrimè commoveant, ab

" that things which ſtrike us at firſt view by their " vivacity, and which even give us pleaſure by " that ſurpriſe, almoſt as ſoon diſguſt and ſatiate " us. Let us, for inſtance, conſider our modern " paintings. Can any thing be more ſplendid and " lively? What beauty, what variety of colours! " How ſuperior are they in this point to thoſe of " the antient! However, all theſe new pieces, " which charm us at firſt ſight, have no long im- " preſſion; whilſt, on the contrary, we are never " tired with contemplating the others, notwith- " ſtanding all their ſimplicity, and even the groſ- " neſs of ther colouring." Cicero gives no reaſon for theſe effects: But Dionyſius Halicarnaſſenſis, who lived alſo in the time of Auguſtus, does. " The antients, ſays he, were great deſigners, and " underſtood perfectly all the grace and force of " expreſſion, though their colouring was ſimple " and little various. But the modern painters, " who excel in colouring and ſhades, are vaſtly far " from deſigning ſo well, and do not treat the paſ- " ſions with the ſame ſucceſs." This double teſti- mony ſhews us, that the antients had ſucceeded no leſs in painting than ſculpture: and their ſuperiority in the latter no-body ever conteſted. It appears at leaſt, without carrying any thing to extremes, that that the antients roſe as high in the parts of deſign, chiaro-oſcuro, *(light and ſhade)* expreſſion and com- poſition, as the moſt excellent moderns can have done; but, as to colouring, that they were much inferior to the latter.

Dion. Halicarn. in Iſæo. p. 104.

I cannot conclude what regards painting and ſculpture, without deploring the abuſe made of it,

ab iis celerrimè faſtidio quodam & ſatietate abalienamur. Quantò colorum pulchritudine & varietate floridiora ſunt in picturis novis pleraque quam in veteribus! quæ tamen, etiamſi primo aſpectu nos ceperunt, diutiùs non delectant: cùm iidem nos, in antiquis tabulis, illo ipſo horrido obſoletoque teneamur. *Cic. de orat.* l. 3. n. 98.

even

even by thoſe who have moſt excelled in it: I ſpeak equally of the antients and moderns. All the arts in general, but eſpecially the two we are now upon, ſo eſtimable in themſelves, ſo worthy of admiration, which produce ſuch amazing effects, that by the ſtrokes of the chiſſel animate marble and braſs; and, by the mixture of colours, repreſent all the objects of nature to the life: theſe arts, I ſay, owe a particular homage to virtue; to the honour and advancement of which, the original author and inventor of all arts, that is to ſay, the Divinity himſelf, has peculiarly allotted them.

This is the uſe which even the Pagans believed themſelves obliged to make of ſculpture and painting, by conſecrating them to the memory of great men, and the expreſſion of their glorious actions. * Fabius, Scipio, and the other illuſtrious perſons of Rome, confeſſed, that upon ſeeing the images of their predeceſſors, they found themſelves animated to virtue in an extraordinary manner. It was not the wax of which thoſe figures were formed, nor the figures themſelves, that produced ſuch ſtrong impreſſions in their minds; but the ſight of the great men, and the great actions of which they renewed and perpetuated the remembrance, and inſpired at the ſame time an ardent deſire to imitate them.

Polyb. l. 6. p. 495, 496.

Polybius obſerves, that theſe images, that is to ſay, the buſto's of wax, which were expoſed on the days of ſolemnity in the halls of the Roman magiſtrates, and were carried with pomp at their funerals, kindled an incredible ardor in the minds of the young men, as if thoſe great men had quitted

* Sæpe audivi Q. Maxumum, P. Scipionem, præterea civitatis noſtræ præclaros viros ſolitos ita dicere, cùm majorum imagines intuerentur, vehementiſſimè ſibi animum ad virtutem accendi. Scilicet non ceram illam, neque figuram, tantam vim in ſeſe habere: ſed memoria rerum geſtarum eam flammam egregiis viris in pectore creſcere, neque prius ſedari, quam virtus eorum famam atque gloriam adæquaverit. *Salluſt. in præfat. bel. Jugurth.*

their tombs, and returned from the dead, to animate them in perſon to follow their example.

Agrippa *, Auguſtus's ſon-in-law, in a magnificent harangue, worthy of the firſt and greateſt citizen of Rome, ſhews, by ſeveral reaſons, ſays Pliny, how uſeful it would be to the ſtate to expoſe publicly the fineſt pieces of antiquity in every kind, in exciting a noble emulation in the youth: which, no doubt, adds he, would be much better than to baniſh them into the country, to the gardens and other places of pleaſure of private men.

Accordingly Ariſtotle ſays, that ſculptors and painters inſtruct men to form their manners by a much ſhorter and more effectual method than that of the philoſophers; and that there are paintings as capable of making the moſt vicious reflect within themſelves as the fineſt precepts of morality. St. Gregory Nazianzen relates a ſtory of a courtezan, who, in a place where ſhe did not come to make ſerious reflections, caſt her eyes by accident on the picture of Polæmon, a philoſopher famous for a change of life, that had ſomething prodigious in it; which occaſioned her to reflect ſeriouſly, and brought her to a due ſenſe of herſelf. Cedrenus tells us, that a picture of the laſt judgment contributed very much to the converſion of a king of the Bulgarians. The ſenſe † of ſeeing is far more lively than that of hearing; and an image, which repreſents an object in a lively manner, ſtrikes us quite otherwiſe than

* Extat ejus (Agrippæ) oratio magnifica, & maximo civium digna, de tabulis omnibus ſigniſque publicandis: quod fieri ſatiùs fuiſſet, quam in villarum exilia pelli. *Plin.* l. 35. c. 4.

† Segnius irritant animos demiſſa per aures,
Quam quæ ſunt oculis ſubjecta fidelibus. HOR.

Things by the ear a dull impreſſion find,
To thoſe the faithful eye preſents the mind.

Sic intimos penetrat ſenſus (pictura) ut vim dicendi nonnunquam ſuperare videatur. *Quintil.*

a dif-

a diſcourſe. St. Gregory of Nyſſa declares, that he was touched even to ſhedding of tears, at the ſight of a painting.

This effect of painting is ſtill more inſtant in regard to bad than good. * Virtue is foreign, vice natural to us. Without the help of guides or examples, (and thoſe we meet with every-where) an eaſy propenſity leads us to the latter, or rather hurries us on to it. What then muſt we expect, when ſculpture, with all the delicacy of art, and painting, with all the vivacity of colours, unite to inflame a paſſion already but too apt to break out, and too ardent of itſelf? What looſe ideas do not thoſe naked parts of young perſons ſuggeſt to the imagination, which ſculptors and painters ſo commonly take the liberty to exhibit? † They may do honour to the art, but never to the artiſts.

Without ſpeaking of Chriſtianity in this reſpect, which abhors all licentious ſculptures and paintings, the ſages of the Pagan world, blind as they were, condemn them almoſt with equal ſeverity. Ariſtotle, in his books *De republica*, recommends it to magiſtrates, as one of the moſt eſſential parts of their duty, to be attentive in preventing ſtatues and paintings of this kind from appearing in cities, as they are capable of teaching vice, and corrupting all the youth of a ſtate. ‡ Seneca degrades painting and ſculpture, and denies them the name of liberal arts, whenever they tend to promote vice.

Ariſtot. in Polit. l. 7. c. 17.

Peccare docentes hiſtorias monet. Hor.

* Ad deteriora faciles ſumus; quia nec dux poteſt, nec comes deeſſe; & res etiam ipſa ſcire duce, ſine comite procedit: non pronum eſt tantum ad vitia, ſed præceps [iter.] *Senec. Epiſt.* 97.

† Non hic per nudam pictorum corporum pulchritudinem turpis proſtat hiſtoria, quæ ſicut ornat artem, ſic devenuſtat artificem. *Sidon. Apollin.* l. 11. Ep. 2.

‡ Non enim adducor ut in numerum liberalium artium pictores recipiam, non magis quam ſtatuarios aut marmoreos, aut cæteros luxuriæ miniſtros. *Senec. Ep.* 88.

Pliny

Pliny the naturaliſt, all enthuſiaſm as he is, for the beauty of the antique works, treats as diſhonourable and criminal the behaviour of a painter in this point, who was otherwiſe very famous: *Fuit Arellius Romæ celeber, niſi* FLAGITIO INSIGNI *corrupiſſet artem.* He expreſſes a juſt indignation againſt the ſculptors, who carved obſcene images upon cups and goblets, that people might not drink, in ſome meaſure, without obſcenity; as if, ſays he, drunkenneſs did not ſufficiently induce debauchery, and it were neceſſary to excite it by new attractions: *Vaſa adulteriis cælata, quaſi per ſe parum doceat libidinem temulentia——Ita vina ex libidine hauriuntur, atque etiam præmio invitatur ebrietas.*

Plin. l. 35. c. 10.

Id. l. 14. c. 22.

The very poets themſelves declare warmly againſt this indecency. Propertius wonders, that temples are erected in public to chaſtity, whilſt immodeſt pictures are tolerated in private houſes, which cannot but corrupt the imaginations of young virgins; that, under the allurement of objects grateful to the eye, conceal a mortal poiſon to the heart, and ſeem to give public leſſons of impurity. He concludes with ſaying, that thoſe indecent figures were unknown to our anceſtors; the walls of their apartments were not painted by obſcene hands, to place vice in honour; nor exhibit it as a ſpectacle for admiration. The paſſage is too fine not to be inſerted here at large.

Propert. l. 2. Eleg. 5.

Templa Pudicitiæ quid opus ſtatuiſſe puellis,
Si cuivis nuptæ quidlibet eſſe licet?
Quæ manus obſcœnas depinxit prima tabellas,
Et poſuit caſtâ turpia viſa domo:
Illa puellarum ingenuos corrupit ocellos,
Nequitiæque ſuæ noluit eſſe rudes.
Ah! gemat in terris, iſta qui protulit arte
Jurgia ſub tacita condita lætitia.
Non iſtis olim variabant tecta figuris:
Tum paries nullo crimine pictus erat.

Whence

Whence riſe theſe fanes to virgin modeſty,
If every wife to every thing is free?
Who firſt obſcenity in colours drew,
In the chaſte houſe who plac'd it firſt to view,
Defil'd the harmleſs maid's ingenuous eyes,
And would not leave her ignorant of vice?
Woe to the man! whoſe vicious pencil taught
In grateful tints to urge a guilty thought:
Our fathers homes ne'er own'd theſe noxious arts;
No crimes were painted on their walls or hearts.

We have ſeen a city, that had the choice of two ſtatues of Venus, both done by Praxiteles, that is ſaying every thing, the one covered, and the other naked, prefer the former, though much the leſs eſteemed, becauſe more conformable to modeſty and chaſtity. Can any thing be added to ſuch an example? What a reproach were it to us, if we were aſhamed to follow it!

CHAP.

CHAPTER VI.

OF MUSIC.

THE Music of the antients was a ſcience of far greater extent than is generally imagined. Beſides the compoſition of muſical airs, and the execution of thoſe airs with voices and inſtruments, to which ours is confined, the antient muſic included the art of poetry, which taught the rules for making verſes of all kinds, as well as to ſet thoſe ſuſceptible of them to notes; the art of *Saltation*, dancing or geſture, which taught the ſtep and attitude, either of the dance properly ſo called, or the uſual manner of walking, and the geſture proper to be uſed in declaiming, contained alſo the art of compoſing and writing notes to the ſimple declamation; to direct as well the tone of the voice by thoſe notes, as the degree and motions of geſture; an art very much in uſe with the antients, but abſolutely unknown to us. All theſe different parts, which have actually a natural relation to each other, compoſed originally one and the ſame art, exerciſed by the ſame artiſts; though they divided in proceſs of time, eſpecially poetry, which became an order by itſelf.

I ſhall briefly treat all theſe parts, except that which relates to verſification, which will have its place elſewhere; and ſhall begin with muſic properly ſo called, and ſuch as it is known amongſt us.

ARTICLE I.

Of muſic properly ſo called.

MUSIC is an art, which teaches the properties of ſounds capable of producing melody and harmony.

SECT. I.

Origin and wonderful effects of muſic.

SOME authors pretend, that the birds learnt men to ſing, in ſuggeſting by their various notes and warbling, how capable the different modulations and tones of the voice are of pleaſing the ear: But man had a more excellent maſter, to whom alone he ought to direct his gratitude.

The invention of muſic, and of the inſtruments in which a principal part of it conſiſts, is a preſent from God, as well as the invention of the other arts. It adds to the ſimple gift of ſpeech, which of itſelf is ſo highly valuable, ſomething more lively, more animated, and more proper to give utterance to the ſentiments of the ſoul. When it is penetrated and fired with ſome object that ſtrongly poſſeſſes it, the uſual language does not ſuffice for its tranſports. It ſprings forth in a manner out of itſelf, it abandons itſelf to the emotions that agitate it, it invigorates and redoubles the tone of the voice, and repeats its words at different pauſes; and not contented with all theſe efforts, calls in inſtruments to its aid, which ſeem to give it eaſe, by lending ſounds a variety, extent, and continuation, which the human voice could not have.

This

This gave birth to muſic, made it ſo affecting and eſtimable, and ſhews at the ſame time, that properly ſpeaking, its right uſe is in religion ſolely, to which alone it belongs, to impart to the ſoul the lively ſentiments which tranſport and raviſh it, which exalt its gratitude and love, which are ſuited to its admiration and extacies, and which make it experience that it is happy, in applauding, to uſe the expreſſion, its joy and happineſs, as David did in all his divine ſongs, that he employs ſolely in adoring, praiſing, giving thanks, and ſinging the greatneſs of God, and proclaiming the wonders of his power.

Such was the firſt uſe men made of muſic, ſimple, natural, and without art or refinement in thoſe times of innocence, and in the infancy of the world; and without doubt the family of Seth, with whom the true worſhip was depoſited, preſerved it in all its purity. But ſecular perſons, more inſlaved to ſenſe and paſſion, and more intent upon ſoftening the pains of this life, upon rendering their exile agreeable, and alleviating their diſtreſſes, abandoned themſelves more readily to the charms of muſic, and were more induſtrious to improve it, to reduce it into an art, to eſtabliſh their obſervations upon certain rules, and to ſupport, ſtrengthen, and diverſify it by the help of inſtruments.

Gen. iv. 21. The Scripture accordingly places this kind of muſic in the family of Cain, which was that of the outcaſts, and makes Jubal, one of the deſcendants of that chief of the unrighteous, the author of it. And we ſee in effect, that muſic is generally devoted to the objects of the paſſions. It ſerves to adorn, augment, and render them more affecting; to make them penetrate the very ſoul by additional charms; to render it the captive of the ſenſes; to make it dwell wholly in the ears; to inſpire it with a new

a new propenſity to ſeek its conſolation from without; and to impart to it a new averſion for uſeful reflections and attention to truth. The abuſe of muſic, almoſt as antient as its invention, has occaſioned Jubal to have more imitators than David. But this ought not to caſt any reproach upon muſic itſelf. For, as Plutarch obſerves upon this ſubject, few or no perſons of reaſon will impute to the ſciences themſelves the abuſe ſome people make of them: which is ſolely to be aſcribed to the diſpoſition to vice of thoſe who profane them. Plut. de Muſic. p. 1146.

This exerciſe has in all times been the delight of all nations, of the moſt barbarous, at well as of thoſe who valued themſelves moſt upon their civility. And it muſt be confeſſed, that the * Author of nature has implanted in man a taſte and ſecret tendency for ſong and harmony, which ſerve to nouriſh his joy in times of proſperity, to diſpel his anguiſh in affliction, and to comfort him in ſupporting the pains and fatigues of his labours. There is no artificer that has not recourſe to this innocent invention; and the ſlighteſt air makes him almoſt forget all his fatigues. The harmonious cadence with which the workmen ſtrike the glowing maſs upon the anvil, ſeems to leſſen the weight of their heavy hammers. The very rowers experience a kind of relief in the ſort of concert formed by the harmonious and uniform motion of their oars. † The antients ſucceſsfully employed muſical inſtruments, as is ſtill the cuſtom, to excite martial ardor in the hearts of the ſoldiery; and Quintilian

* Atque eam (muſicam) natura ipſa videtur ad tolerandos faciliùs labores velut muneri nobis dediſſe. Si quidem & remiges cantus hortatur: nec ſolum in iis operibus in quibus plurimum conatus præeunte aliqua jucunda voce conſpirat, ſed etiam ſingulorum fatigatio quamlibet ſe rudi modulatione ſolatur. *Quintil.* l. 1. c. 10.

† Duces maximos & fidibus & tibiis cecinisſe traditum, & exercitus Lacedæmoniorum muſicis accenſos modis. Quid autem aliud in noſtris Legionibus cornua ac tubæ faciunt? quorum concentus, quanto eſt vehementior, tanto Romana in bellis gloria cæteris præſtat. *Quintil.* l. 2. c. 10.

partly

partly aſcribes the reputation of the Roman troops to the impreſſions made by the warlike ſounds of fifes and trumpets upon the legions.

I have ſaid, that muſic was in uſe amongſt all nations: but it was the Greeks who placed it in honour, and by the value they ſet upon it, raiſed it to a very high degree of perfection. * It was a merit with their greateſt men to excel in it, and a kind of ſhame to be obliged to confeſs their ignorance in it. No hero ever made Greece more illuſtrious than Epaminondas: his dancing gracefully, and touching muſical inſtruments with ſkill, were reckoned amongſt his fine qualities. Some years before his time, the refuſal of Themiſtocles, at a feaſt, to play an air upon the lyre, was made a reproach, and was a kind of diſhonour to him. To be ignorant of muſic paſſed in thoſe times for a great defect of education.

It is in effect of this that the moſt celebrated philoſophers, who have left us treatiſes upon policy, as Plato and Ariſtotle, particularly recommended the teaching of muſic to young perſons. Amongſt the Greeks it was an eſſential part of education. Beſides which, it has a neceſſary connection with that part of Grammar called *Proſody*, which treats upon the length or ſhortneſs of ſyllables in pronunciation, upon the meaſure of verſes, their rhyme and cadence, *(or pauſes;)* and principally upon the manner of accenting words: the antients were aſſured that it might conduce very much to form the manners of youth, by introducing a kind of harmony into them, which might incline them

* Summam eruditionem Græci ſitam cenſebant in nervorum vocumque cantibus. Igitur Epaminondas princeps, meo judicio, Græciæ, fidibus præclarè ceciniſſe dicitur: Themiſtocleſque, aliquot ante annis, cum in epulis recuſâſſet lyram, habitus eſt indoctior. Ergo in Græcia muſici floruerunt, diſcebantque id omnes; nec, qui neſciebat, ſatis excultus doctrinâ putabatur. *Cic. Tuſc.* 1. n. 4.

In ejus Epimanondæ virtutibus commemorabatur, ſaltâſſe eum commodè, ſcienterque tibiis cantâſſe. *Corn. Nep. in præfat.*

to

to whatsoever was laudable and polite; nothing being of greater use, according to Plutarch, than music to excite persons at all times to virtuous actions, and especially to confront the dangers of war. Plut. de Music. p. 1140.

Music was far from being much esteemed in the happy times of the republic. It passed in those days for a thing of little consequence, as Cornelius Nepos tells us, where he observes, upon the different taste of nations, in regard to several things. Sallust's reproach of a Roman lady, that she knew better how to sing and dance, than was consistent with the character of a woman of honour and probity; *saltare & psallere elegantius quam necesse est probæ*; sufficiently shews what the Romans thought of music. As to dancing, they had a strange idea of it; and would say, that, to practise it, one should either be drunk or mad: *Nemo saltat fere sobrius, nisi forte insanit.* Such was the Roman severity, till their commerce with the Greeks, and still more, their riches and opulence made them give into the excesses, with which the Greeks cannot so much as be reproached. In præfat. In bell. Catilin. Cic. in orat. pro Muræn. n. 13.

The antients attributed wonderful effects to music; either to excite or suppress the passions, or to soften the manners, and humanize nations naturally savage and barbarous.

Pythagoras, * seeing a young stranger, who was heated with the fumes of wine, and at the same time animated by the sound of a flute, played on in the Phrygian measure, upon the point of committing violence in a chaste family, restored the young man's tranquillity and reason, by ordering the female minstrel to change the measure, and to play in more solemn and serious numbers, according to the cadence called after the foot *Spondee*.

* Pythagoram accepimus, concitatos ad vim pudicæ domui afferendam juvenes, jussa mutare in spondæum modos tibicina, composuisse. *Quintil.* l. 1. c. 10.

De placit. Hippoc. & Plat. l. 5. c. 6.

Galen relates something exactly of the same nature, of a musician of Miletus, named Damon. He tells us of some young people, that a female performer upon the flute had made frantic, by playing in the Phrygian measure, and whom she brought to their senses again, by the advice of this Damon, in changing the music from the Phrygian to the Doric measure.

Orat. 1. de regn. init.

De fortun. Alex. p. 335.

Dion Chrysostome, and some others, inform us, that the musician Timotheus, playing one day upon the flute before Alexander the Great, in the measure called Ὀρθιος, which is of the martial kind, that prince immediately ran to his arms. Plutarch says almost the same thing of Antigenides the flutenist, who at a banquet fired that prince in such a manner, that, rising from the table like one out of his senses, he catched up his arms, and clashing them to the sound of the flute, was almost ready to charge the guests.

Polyb. l. 4. p. 289, 291.

Amongst the wonderful effects of music, nothing more affecting perhaps, nor better attested, can be instanced, than what regards the Arcadians. Polybius, a wise, exact historian, well worthy of entire belief, is my authority. I shall only abridge his narrations and reflections.

The study of music, says he, has its utility with all men, but is absolutely necessary to the Arcadians. This people, in establishing their republic, though otherwise very austere in their manner of life, had so high an opinion of music, that they not only taught that art to their children, but obliged young people to apply to it till the age of thirty. Is is not shameful amongst them to profess themselves ignorant of other arts: but it is highly dishonourable not to have learnt to sing, and not to be able to give proofs of it on occasion.

Now, says Polybius, their first legislators seem to me, in making such institutions, not to have designed to introduce luxury and effeminacy, but only

only to ſoften the ferocity of the Arcadians, and to divert, by the practice of muſic, their gloomy and melancholy diſpoſition, undoubtedly occaſioned by the coldneſs of the air, which the Arcadians breathe almoſt throughout their whole country.

But the Cynethians having neglected this aid, of which they had the moſt need, as they inhabited the rudeſt and moſt ſavage part of Arcadia, both as to the air and climate, at length became ſo fierce and barbarous, that there was no city in Greece wherein ſo great and ſo frequent crimes were committed, as in that of Cynethia.

Polybius concludes this account, with obſerving, that he had inſiſted the more upon it for two reaſons. The firſt, to prevent any of the Arcadian ſtates, out of the falſe prejudice that the ſtudy of muſic is only a ſuperfluous amuſement amongſt them, from neglecting that part of their diſcipline. The ſecond, to induce the Cynethians to give muſic the preference to all other ſciences, if ever God (the expreſſion is remarkable) if ever God ſhould inſpire them to apply themſelves to arts that humanize a people. For that was the ſole means to correct their natural ferocity.

I do not know whether it be poſſible to find any thing in antiquity which equals the praiſe Polybius here gives muſic: and every one knows what kind of perſonage Polybius was. Let us add here what the two great lights of the antient philoſophy, Plato and Ariſtotle, ſay of it, who frequently recommend the ſtudy of it, and very much extol its advantages. Can a more authentic and favourable teſtimony be deſired? But that the authority of theſe great men may not impoſe upon us, I ought here to mention what kind of muſic they would be underſtood to mean. Quintilian, who had the ſame thoughts upon this head, will explain their opinion: it is in a chapter, where he had given muſic the higheſt praiſe. "Though the examples I

Quintil. l. 1. c. 10.

" have cited, says he, sufficiently shew what spe-
" cies of music I approve, I think myself, how-
" ever, obliged to declare here, that it is not the
" same with which the theatres in these days re-
" sound, that by its wanton and effeminate airs,
" has not a little contributed to extinguish and
" suppress in us whatever remained of our antient
" manly virtue:" *Apertius profitendum puto, non hanc a me præcipi, quæ nunc in scenis effeminata, & impudicis modis fracta, non ex parte minima, si quid in nobis virilis roboris manebat, excidit.* " When I
" recommend music therefore, it is that of which
" men filled with honour and valour made use, in
" singing the praises of others like themselves. It
" is as far from my intent to mean here those dan-
" gerous instruments, whose languishing sounds
" convey softness and impurity into the soul, and
" which ought to be held in horror by all persons
" of sense and virtue. I understand that agree-
" able art of affecting the soul by the powers of
" harmony, in order either to excite or assuage the
" passions, according to occasion and reason."

It is this sort of music that was in so much esteem with the greatest philosophers and wisest legislators amongst the Greeks, because it civilizes savage minds, softens the roughness and ferocity of dispositions, renders people more capable of discipline, makes society more grateful and joyous, and gives horror for all the vices which incline men to inhumanity, cruelty and violence.

It is not without its advantages to the body, and conduces to the cure of certain distempers. What is related of the wonderful effects of music, upon such as have been bit by the Tarantula, would appear incredible, if not supported by authorities, to which we cannot, with reason, refuse our belief.

Memoirs of the Acad. of Sciences. An. 1702. The Tarantula is a large spider with eight eyes, and as many legs. It is not only to be found about Tarento,

Tarento, or in Puglia; but in ſeveral other parts of Italy, and in the iſland of Corſica.

Soon after a man is bit by a Tarantula, the part affected feels a very ſevere pain, ſucceeded in a few hours by a numbneſs. He is next ſeized with a profound melancholy, can ſcarce reſpire; his pulſe grows faint, his ſight is interrupted and ſuſpended, till at laſt he loſes all ſenſe and motion, and dies, unleſs aſſiſted in time. Phyſicians uſe ſeveral remedies for the cure of this illneſs, which would be uſeleſs, if muſic did not come in to their aid.

When the perſon bit is without ſenſe and motion, a performer upon muſical inſtruments tries different airs; and, when he hits upon that which in its tones and modulation ſuits the patient, he begins to ſtir a little; at firſt he moves his fingers to the time, then his arms and legs, and by little and little his whole body; at laſt he gets up and dances, continually increaſing his activity and force. Some of theſe will dance ſix hours without reſting. After this they are put to bed, and, when it is ſuppoſed that they have ſufficiently recovered their firſt dance, they are brought out of bed by the ſame tune to begin again. This exerciſe continues ſeveral days, about ſix or ſeven at moſt, till the patient finds himſelf tired, and incapable to dance any longer, which denotes his being cured. For, as long as the poiſon operates upon him, he would dance, if he were ſuffered, without ceaſing, and die by exhauſting his ſpirits. The patient, that begins to perceive himſelf weary, recovers his underſtanding and ſenſes by degrees, and comes to himſelf, as if he waked out of a deep ſleep, without remembering what had paſt during his diſorder, not even his dancing. This is a very extraordinary caſe, but abſolutely true; of which I muſt leave it to phyſicians to explain the cauſe.

SECT. II.

Inventors and improvers of muſic, and muſical inſtruments.

THE profane hiſtorians aſcribe the diſcovery of the firſt rules of muſic to their fabulous Mercury, others to Apollo, and ſome to Jupiter himſelf. They undoubtedly intended thereby to inſinuate, that ſo uſeful an invention ought to be attributed only to the gods, and that it was an error to do any man whatſoever the honour of it.

Plutarch's treatiſe upon muſic, explained and ſet in a true light by the learned remarks of Mr. Burette, will ſupply me with a great part of what I ſhall relate of the hiſtory of thoſe, who are ſaid to have contributed moſt the improvement of this art. I ſhall content myſelf with ſimply pointing out the moſt antient, who are almoſt known only in fabulous hiſtory, without confining myſelf to the order of time.

AMPHION.

Amphion is held by ſome to be the inventor of the * *Cithara*, or lyre; for theſe two inſtruments were very little different, as I ſhall ſhew in the ſequel, and are often confounded with each other by authors. It is conjectured, that the fable of Thebes being built by the ſound of Amphion's lyre, is later than Homer's time, who does not mention it, and would not have failed to have adorned his poems with it, had he known it.

The cotemporaries of Amphion were *Linus*, *Anthes*, *Pierius*, and *Philammon*. The laſt was

* *I ſhall call this inſtrument ſo, as often as I ſhall have occaſion to ſpeak of it; becauſe our* Guitar *or* Lute, *which derives its name from it, is a quite different kind of inſtrument.*

father

father of the famous Thamyris, the fineſt voice of his time, and the rival of the muſes themſelves, who having been abandoned to the vengeance of thoſe goddeſſes, loſt his ſight, voice, underſtanding, and even the uſe of his lyre.

Orpheus.

The reputation of Orpheus flouriſhed from the expedition of the Argonauts, of which number he was; that is to ſay, before the Trojan war. Linus was his maſter in muſic, as he was alſo of Hercules. Orpheus's hiſtory is known by all the world.

Hyagnis.

Hyagnis is ſaid to have been the firſt player upon the flute. He was the father of Marſyas, to whom the invention of the flute is aſcribed. The latter ventured to challenge Apollo, who only came off victor in this diſpute, by joining his voice with the ſound of his lyre. The vanquiſhed was flead alive.

Olympius.

There were two of this name, both famous players upon the flute. The moſt antient, who was by birth a Myſian, lived before the Trojan war. He was the diſciple of Marſyas, and excelled in the art of playing npon ſtring-inſtruments.

The ſecond Olympius was a Phrygian, and flouriſhed in the time of Midas.

Demodocus, Phemius.

Homer praiſes theſe two muſicians in ſeveral parts of the Odyſſey. Demodocus had compoſed two poems: the one upon the taking of Troy, the other upon the nuptials of Venus and Vulcan.

Homer makes them both ſing in the palace of Alcinous king of the Pheacians, in the preſence of Ulyſſes. He ſpeaks of Phemius as of a ſinger inſpired by the gods themſelves. It is he who, by the ſinging of his poetry ſet to muſic, and accompanied with the ſounds of his lyre, inlivens the banquets, in which the ſuitors of Penelope paſs whole days.

The author of the life of Homer aſcribed to Herodotus affirms, that Phemius ſettled at Smyrna; that he taught youth grammar and muſic, and married Critheis there, whoſe illegitimate ſon Homer was. He tells us, Homer was born before this marriage, and was educated with great care by his father-in-law, after he had adopted him.

TERPANDER.

Authors do not agree with each other concerning Terpander's country, nor the time in which he lived. Euſebius places it in the 33d olympiad. This epocha ought to be of later date, if it be true, that this poet and muſician was the firſt who obtained the prize in the Carnian games, which were not inſtituted at Lacedæmon till the 36th olympiad.

Beſides this victory, which did great honour to Terpander's ability in muſical poetry, he ſignalized himſelf by this art upon ſeveral other very important occaſions. Much is ſaid of the ſedition, which he had the addreſs to appeaſe at Lacedæmon by his melodious ſongs, accompanied with the ſounds of his Cithara. He alſo carried the prize four times ſucceſſively at the Pythian games.

It appears that, the elder Olympius and Terpander having found the lyre in their youth only with four ſtrings, they uſed it as it was, and diſtinguiſhed themſelves by their admirable execution upon it. In proceſs of time, to improve that inſtrument,

they

they both made additions to it, especially Terpander, who made its strings amount to seven.

This alteration very much displeased the Lacedæmonians, amongst whom it was expressly forbidden to change or innovate any thing in the antient music. Plutarch tells us, that Terpander had a fine laid on him by the Ephori, for having added a single string to the usual number of the lyre; and had his own hung up by a nail for an example. From whence it appears, that the lyre of those times was already strung with six chords.

From what Plutarch says, it appears, that Terpander at first composed lyric poems in a certain measure, proper to be sung, and accompanied with the Cithara. He afterwards set these poems to such music, as might best suit the Cithara, which at that time repeated exactly the same sounds as were sung by the musician. In fine, Terpander put the notes of this music over the verses of the songs composed by him, and sometimes did the same upon Homer's poems: after which he was able to perform them himself, or cause others to do so, in the public games.

Prizes of poetry and music, which were seldom or ever separate, were proposed in the four great games of Greece, especially in the Pythian, of which they made the greatest and most considerable part. The same thing was also practised in several other cities of the same country, where the like games were celebrated with great solemnity, and a vast concourse of spectators.

Phrynis.

Phrynis was of Mitylene, the capital of the island of Lesbos. He was the scholar of Aristoclitus for the harp, and could not fall into better hands, that master being one of Terpander's descendants. He is said to have been the first who obtained

obtained the prize of this inſtrument in the games of the Panathenea, celebrated at Athens the fourth year of the 80th olympiad. He had not the ſame ſucceſs, when he diſputed that prize with the muſician Timotheus.

Phrynis may be conſidered as the author of the the firſt alterations made in the antient muſic, with regard to the Cithara. Theſe changes conſiſted, in the firſt place, in the addition of two new ſtrings to the ſeven, which compoſed that inſtrument before him; in the ſecond place, in the compaſs and modulation, which had no longer the noble and manly ſimplicity of the antient muſic. Ariſtophanes reproaches him with it in his comedy of *the Clouds*, wherein Juſtice ſpeaks in theſe terms of the antient education of youth. *They went together to the houſe of the player upon the Cithara——where they learned the hymn of the dreadful Pallas, or ſome other ſong, which they ſung according to the harmony delivered down to them from their anceſtors. If any of them ventured to ſing in a buffoon manner, or to introduce inflections of voice, like thoſe which prevail in theſe days in the airs of Phrynis, he was puniſhed ſeverely.*

Phrynis having preſented himſelf in ſome public games at Lacedæmon, with his Cithara of nine ſtrings, Ecprepes, one of the Ephori, would have two of them cut away, and ſuffered him only to chuſe whether they ſhould be the two higheſt or the two loweſt. Timotheus, ſome ſhort time after, being preſent upon the ſame occaſion at the Carnian games, the Ephori acted in the ſame manner with regard to him.

TIMOTHEUS.

Timotheus, one of the moſt celebrated muſician poets, was born at Miletus, an Ionian city of Caria, in the third year of the 93d olympiad. He flouriſhed at the ſame time with Euripides and Philip

Philip of Macedon, and excelled in lyric and dithyrambic poetry.

He applied himself particularly to music, and playing on the Cithara. His first endeavours were not successful, and he was hissed by the whole people. So bad a reception might have discouraged him for ever; and he actually intended to have entirely renounced an art, for which he did not seem intended by nature. Euripides undeceived him in that mistake, and gave him new courage, by making him hope extraordinary success for the future. Plutarch, in relating this fact, to which he adds the examples of Cimon, Themistocles, and Demosthenes, who were reassured by counsels of a like nature, observes with reason, that it is doing the public great service, to encourage young persons in this manner, who have a fund of genius and fine talents; and to prevent their being disgusted in effect of some faults, they may commit in an age subject to error, or of some bad successes, which they may at first experience in the exercise of their profession.

Euripides was not deceived in his views and expectation. Timotheus became the most excellent performer upon the Cithara of his times. He greatly improved this instrument, according to Pausanias, by adding four strings to it, or, as Suidas tells us, only two, the tenth and eleventh to the ninth, of which the Cithara was composed before him. Authors differ extremely upon this point, and often even contradict themselves about it.

This innovation in music had not the general approbation. The Lacedæmonians condemned it by a public decree, which Bæotius has preserved. It is wrote in the dialect of the county, in which the prevalent consonant ἐῶ renders the pronunciation very rough; ἐπει τὰι Τιμόθεος ὁ Μιλήσιος παραγνόμενος ἐς τὰν ἁμέτεραν πόλιν, &c. and contains in substance: That Timotheus of Miletus having come to their city, had

had expreſſed little regard for the antient muſic and lyre; that he had multiplied the ſounds of the former, and the ſtrings of the latter; that, to the antient, ſimple, and uniform manner of ſinging, he had ſubſtituted one more complex, wherein he had introduced the chromatic kind; that, in his poem upon the delivery of Semele, he had not obſerved a ſuitable decency: that to obviate the effects of ſuch innovations, which could not but be attended with conſequences pernicious to good manners, the kings and the Ephori had publicly reprimanded Timotheus, and had decreed, that his lyre ſhould be reduced to ſeven ſtrings as of old, and that all thoſe of a modern invention ſhould be retrenched, &c. This fact is related by Athenæus, with this circumſtance, that when the executioner was upon the point of cutting away the new ſtrings conformable to the decree, Timotheus having perceived in the ſame place a ſmall ſtatue of Apollo, with as many ſtrings upon the lyre as there were upon his, he ſhewed it to the judges, and was diſmiſſed acquitted.

His reputation drew after him a great number of diſciples. It is ſaid, that he took twice the ſum of thoſe, who came to learn to play upon the flute, (or the Cithara) if they had been taught before by another maſter. His reaſon was, that when an excellent muſician ſucceeded ſuch as were indifferent, he had double the pains with the ſcholar: that of making him forget what he had learnt before, the far greater difficulty; and to inſtruct him anew.

Archilochus.

Archilochus rendered himſelf equally famous for poeſy and muſic. I ſhall ſpeak of him in the ſequel under the title of a poet. In this place I conſider him only as a muſician; and of all that Plutarch

tarch says of him upon that head, I shall only repeat the passage, wherein he ascribes to him *the musical execution of Iambic verses, of which some are only spoken whilst the instruments play, and others are sung.*

This passage, says Mr. Burette, shews us, that in Iambic poetry there were verses merely declamatory, which were only repeated or spoken; and that there were others which were sung. But what this same passage perhaps includes, that is not so well known, is, that these *declamatory* Iambics were accompanied with the sound of the Cithara, and other instruments of the string kind. It remains to know in what manner this accompanying verses spoken was performed. According to all appearance, the player upon the Cithara did not only give the poet or actor the general tone of his utterance, and support him in it by the monotony of his playing; but, as the tone of the speaker or declaimer varied according to the different accents, which modified the pronunciation of each word, in order to make this kind of declamation the more distinct; it was necessary that the instrument of music should make all these modifications more sensible, and exactly mark the number or cadence of the poetry, which served it as a guide; and which, in effect of being so accompanied, though not sung, became the more expressive and affecting. In regard to the poetry *sung*, the instrument that accompanied it, conformed its notes servilely to it, and expressed no other sounds, but those of the poet-musician's voice.

ARISTOXENUS.

Aristoxenus was born at Tarentum, a city of Italy. He was the son of the musician Mnesias. He applied himself equally to music and philosophy. He was first the disciple of his father, then

of

of Xenophilus the Pythagorean, and laſtly of Ariſtotle, under whom he had Theophraſtus for the companion of his ſtudies. Ariſtoxenus lived therefore in the time of Alexander the Great, and his firſt ſucceſſors.

Of four hundred and fifty-two volumes which Suidas tells us he compoſed, only his three books of *the Elements of Harmony* now remain, which is the moſt antient treatiſe of muſic come down to us.

Heraclid. He warmly attacked Pythagoras's ſyſtem of muſic. That philoſopher, with the view of eſtabliſhing an unalterable certitude and conſtancy in the arts and ſciences in general, and in muſic in particular, endeavoured to withdraw its precepts from the fallacious evidence and report of the ſenſes, to ſubject them ſolely to the determinations of reaſon. Conformably to this deſign, he was for having the harmonic powers or muſical conſonance, inſtead of being ſubjected to the judgment of the ear, which he looked upon as an arbitrary meaſure of little certainty, to be regulated ſolely by the proportions of numbers that are always the ſame. Ariſtoxenes maintains, that to mathematical rules, and the ratio of proportions, it was neceſſary to add the judgment of the ear, to which it principally belonged, to determine in what concerned muſic. He attacked the ſyſtem of Pythagoras in many other points.

Sotericus, one of the ſpeakers, introduced by Plutarch in his treatiſe upon muſic, is convinced, that ſenſation and reaſon ought to concur in the judgment paſt upon the different parts of muſic; ſo that the former do not prejudice the latter by too much vivacity, nor be wanting to it upon occaſion, through too much weakneſs. Now the ſenſe in the preſent queſtion, that is, the hearing, neceſſarily receives three impreſſions at once: that of the *ſound*, that of the *time* or *meaſure*, and that of

of the *letter*; the progreſſion of which conveys the *modulation*, the * *rhyme*, and the *words*. And as there can be no adequate perception of theſe three things ſeparately, and each cannot be followed alone, it ſeems that only the ſoul or reaſon has a right to judge of what this progreſſion or continuity of *ſound*, *rhyme*, and *words*, may have of good or bad.

SECT. III.

The antient muſic was ſimple, grave, and manly. When and how corrupted.

AS amongſt the antients, muſic, by its origin and natural deſtination, was conſecrated to the ſervice of the gods, and the regulation of the manners, they gave the preference to that, which was moſt diſtinguiſhed by its gravity and ſimplicity. Each of theſe prevailed long, both in regard to vocal and inſtrumental muſic. Olympius, Terpander, and their diſciples, at firſt uſed few ſtrings on the lyre, and little variety in ſinging. Notwithſtanding which, ſays Plutarch, all ſimple, as the airs of thoſe two muſicians were, which were confined to three or four ſtrings, they were the admiration of all good judges.

The Cithara, very ſimple at firſt under Terpander, retained this advantage ſome time. It was not permitted to compoſe airs for this inſtrument, nor to change manner of playing upon it, either as to the harmony, or the cadence; and great care was taken to preſerve in the antient airs, their peculiar tone or character: hence they were called *Nomes*, as being intended for laws and models. Νόμος. *Lex.*

* Rhyme, ῥυθμὸς. *The time or meaſure. It may alſo ſignify a bar in muſic.*

The

gards vocal and inſtrumental muſic, to avoid mingling a ſpecies entirely ſacred and devoted to religion, with one wholly profane and abandoned to idolatry, and all the exceſſes conſequential upon it. We may preſume that theſe ſingers, to whom the holy Scripture ſeems to aſcribe a kind of inſpiration and the gift of * prophecy, not to compoſe prophetic pſalms, but to ſing them in a lively and ardent manner, full of zeal and rapture, had carried the ſcience of ſinging to as great a perfection as was poſſible. It was, no doubt, a grand, noble, and ſublime kind of muſic, wherein every thing was proportioned to the majeſty of its object, the Godhead, who, we may add, was its author: for he had vouchſafed to form his miniſters and ſingers himſelf, and to inſtruct them in the manner it pleaſed him, to have his praiſes celebrated.

Nothing is ſo admirable as the order itſelf, which God had inſtituted amongſt the Levites for the exerciſe of this auguſt function. They were four thouſand in number, divided into different bodies, of which each had its chief; and the kind, as well as times, ſtated for the diſcharge of their reſpective duties. Two † hundred fourſcore and eight were appointed to teach the reſt to ſing and play upon inſtruments. We ſee an example of this wonderful order in David's diſtribution of the parts of the ſacred muſic, when he ſolemnized the carrying of the ark from the houſe of Obed-Edom into the citadel of Sion. The whole troop of muſicians were divided into three chorus's. The firſt had

* *And Chenaniah, chief of the Levites, was for ſong (or* PROPHECY:) *he inſtructed about the ſong, becauſe he was ſkilful,* 1 Chron. xv. 22.

David and the captains of the hoſt ſeparated to the ſervice of the ſons of Aſaph, and of Heman, and of Jeduthun, who ſhould PROPHESY *with harps, with pſalteries, and with cymbals, and the number of workmen according to their ſervice was:* 1 Chron. xxv. 1.

† —— *With their brethren that were inſtructed in the ſongs of the Lord, even all that were cunning, two hundred fourſcore and eight.* 1 Chron. xxv. 7.

hollow

hollow inſtruments of braſs, that reſounded exceedingly, unlike our kettle-drum, only in not being covered with ſkins, and having their hollow part laid over with double bars, which they ſtruck on different parts of them. Theſe ſounds ſuited very well the ſacerdotal trumpets that preceded them, and were very proper, by their lively, ſtrong, and broken iterations, to awake the attention of the ſpectators. The ſecond troop of ſacred ſingers played in the treble, or higher, key, on a different inſtrument. The third chorus conſiſted of baſes, that ſerved to exalt and ſuſtain theſe trebles, with which they always played in concert (*perhaps in uniſons*) becauſe directed by the ſame maſter of the ſingers.

It is eaſy to conceive, that the Levites, ſo numerous as they were, deſtined from father to ſon to this ſole exerciſe, taught by the moſt ſkilful maſters, and formed by long and continual habit, muſt have attained great excellency, and at length become conſummate in all the beauties and delicacies of an art, in which they paſſed their whole lives.

This was the true intent of muſic. The moſt noble uſe, that men can make of it, is to employ it in rendering the continual homage of praiſe and adoration to the ſupreme majeſty of God, who has created, and governs, the univerſe, and reſerves ſo ſacred an office for his faithful children. *Hymnus omnibus ſanctis ejus.*

ARTI-

trical ſhews, and the worſhip of certain divinities, of Bacchus amongſt the reſt, in proceſs of time, very much ſet aſide theſe wiſe regulations. They gave birth to dithyrambic poetry, the moſt licentious of all in its expreſſion, meaſure, and ſentiments. It required a muſic of the ſame kind, and in conſequence very remote from the noble ſimplicity of the antient. The multiplicity of ſtrings, and all that vicious redundance of ſound, and levity of ornament, were introduced to an exceſs, and gave room for the juſt complaints of all ſuch as excelled, and had the beſt taſte in this way.

SECT. IV.

Different kinds and meaſures of the antient muſic. Manner of writing the notes to ſongs.

TO ſpeak of the antient muſic in general, and to give a ſlight idea of it, it is proper to obſerve, that there are three kinds of ſymphonies; the vocal, the inſtrumental, and that compoſed of both. The antients knew theſe three kinds of ſymphonies or concerts.

We muſt farther remark, that muſic had at firſt only three meaſures, which were a tone higher than one another. The graveſt of the three was called the *Doric*; the higheſt the *Lydian*; and the middle the *Phrygian*: ſo that the *Doric* and *Lydian* included between them the ſpace of two tones, or of a tercet or third major. By dividing this ſpace into demi-tones, room was made for two other meaſures, the *Ionic* and *Eolean*; the firſt of which was inſerted between the *Doric* and *Phrygian*; the ſecond between the *Phrygian* and *Lydian*. Other meaſures were ſuperadded, which took their denominations from the five firſt, prefixing the preposition ὑπὲρ above, for thoſe above; and the preposition ὑπὸ below, for thoſe below. The *Hyperdoric*, the

the *Hyperionic*, &c. The *Hypodoric*, the *Hypoionic*, &c.

In ſome books of modern ſinging in churches, and at the end of ſome breviaries, to theſe different meaſures are referred the different tones now uſed in chanting divine ſervice. The firſt and ſecond tone belong to the Doric meaſure; the third and fourth to the Phrygian; and the reſt to the Lydian and Mixolydian.

The manner of chanting in the church is in the Diatonic kind, which is the deepeſt, and agrees beſt with divine worſhip.

I return to the firſt diviſion. The vocal ſymphony neceſſarily ſuppoſes ſeveral voices, becauſe one perſon cannot ſing ſeveral parts at the ſame time. When ſeveral perſons ſing in concert together, it is either in uniſon, which is called *Homophony*; or in the octave, and even the double octave; and this is termed *Antiphony*. It is believed that the antients uſed alſo a third manner, which conſiſted in ſinging to a tercet or third.

The inſtrumental ſymphony, amongſt the antients, had the ſame differences as the vocal; that is to ſay, ſeveral inſtruments might play together in the uniſon, the octave, and the third.

To have two ſtrings of an inſtrument, of the ſame ſubſtance, equally thick, and equally ſtrained, expreſs theſe accords with each other, all that is neceſſary is to make their lengths by certain proportions of number. For inſtance, if the two ſtrings be equal in length, they are uniſons; if as 1 to 2, they are octaves; if as 2 to 3, they are fifths; as 3 to 4, they are fourths; and, 4 to 5, they are third majors, &c.

The antients, as well as we, had ſome inſtruments upon which a ſingle performer could execute a kind of concert. Such were the double flute and the lyre.

The firſt of theſe inſtruments was compoſed of two flutes joined in ſuch a manner, that the two

pipes had usually but one mouth in common to both. These flutes were either equal or unequal, in length or in the diameter of the bore. The equal flutes had the same, the unequal different, sounds, of which one was deep, the other high. The symphony, which the two equal flutes made, was in the unison, when the two hands of the performer stopped the same holes of each flute at the same time; or thirds, when he stopped different holes of both flutes. The diversity of sounds, resulting from the unequal flutes, could be only of two kinds, according to the flutes being either octaves or thirds; and in both cases the performer stopped the same holes of each flute at the same time, and in consequence formed a concert either in the octave or third.

By the lyre is meant here every musical instrument in general, with strings strained over a cavity for sound. The antients had several instruments of this kind, which differed only in their form, their size, or the number of their strings; and to which they gave different names, though they often used one for the other. The chief of them were 1. the *Cithara*, Κιθάρα, from which the word Guitar is derived, though applied to a quite different instrument. 2. The *Lyre*, Λύρα, otherwise called Χέλυς, and in Latin *Testudo*, because the bottom resembled the scale of a tortoise, the figure of which animal (as it is said) gave the first idea of this instrument. 3. The Τρίγωνον, or triangular instrument, the only one that has come down to us under the name of the Harp.

The lyre, as I have said before, varied very much in the number of its strings. That of Olympius and Terpander had at first but three, which those musicians knew how to diversify with so much art, that, if we may believe Plutarch, they very much exceeded those who played upon lyres of a greater number. By adding a fourth string to

Plut. de Mus. p. 1137.

the

the other three, they made the * *Tetrachord* complete; and it was the different manner in which harmony was produced by these four strings, that constituted the three kinds of it, called the *Diatonic*, *Chromatic*, and *Inharmonic*. The *Diatonic* kind appertains to the common and ordinary music. In the *Chromatic*, the music was softened by lowering the sounds half a tone, which was directed by a coloured mark, from whence the Chromatic took its name χρῶμα, signifying *colour*. What is now called B flat belongs to the Chromatic music. In the Inharmonic music, on the contrary, the sounds were raised a demi-tone, which was marked, as at present, by a diesis. In the *Diatonic* music, the air or tune could not make its progressions by less intervals than the semi-tones major. The modulation of the *Chromatic* music made use of the semitones minor. In the *Inharmonic* music, the progression of the air might be made by quarter-tones. Lib. 2. in Somn. Scipion. c. 4.

Macrobius, speaking of these three kinds, says, the Inharmonic is no longer in use upon account of its difficulty; that the Chromatic is no longer esteemed, because that sort of music is too soft and effeminate; and that the Diatonic holds the mean between them both.

The addition of a fifth string produced the *Pentachord*. The lyre with seven strings, or the *Heptachord*, was more used, and in greater esteem than all others. However, though it included the seven notes of music, the octave was still wanting. Simonides at length added it, according to Pliny, with an eighth string. Long after him, Timotheus the Milesian, who lived in the reign of Philip king of Macedon, about the 108th olympiad, Plin. l. 7. c. 56. Plut. de Mus. p. 1141.

* *A passage in Horace, differently explained by M. Dacier and father Sanadon, has given learned dissertations upon the instrument called the* Tetrachord.

multiplied, as we have obſerved, the ſtrings of the lyre to the number of eleven. This number was ſtill increaſed.

The lyre, with three or four ſtrings, was not ſuſceptible of any ſymphony. Upon the *Pentachord*, two parts might be played by thirds to each other. The more the number of ſtrings increaſed upon the lyre, the eaſier it was to compoſe airs with different parts upon that inſtrument. The queſtion is to know, whether the antients improved that advantage.

This queſtion, which has been a matter of inquiry for about two ages, in regard to the antient muſic, and conſiſts in knowing whether the Greeks and Romans were acquainted with that kind of it called *Counterpoint*, or concert in different parts, has occaſioned different writings on both ſides. The plan of my work diſpenſes with my entering into an examination of this difficulty, which I confeſs beſides exceeds my capacity.

Martian. Capel. de nupt. Philol.

It is not unneceſſary to know in what manner the antients noted their airs. With them, the general ſyſtem of muſic was divided into eighteen ſounds, of which each had its particular name. They invented characters to ſignify each tone: σημεῖα, *ſigns*. All theſe figures were compoſed of a monogram, formed from the firſt letter of the particular name of each of the eighteen ſounds of the general ſyſtem. Theſe ſigns, which ſerved both for vocal and inſtrumental muſic, were written above the words upon two lines, of which the upper was for the voice, and the lower for the inſtruments. Theſe lines were not larger than lines of common writing. We have ſome Greek manuſcripts, in which theſe two ſpecies of notes are written in the manner I have related. From them the * hymns

* *Theſe hymns were written by a poet named Dionyſius, little known in other reſpects.*

to

to Calliope, Nemeſis, and Apollo, as well as the ſtrophe of one of Pindar's odes, were taken. Mr. Burette has given us all theſe fragments, with the antient and modern notes, in the fifth volume of the memoirs of the academy of Belles Lettres.

The characters, invented by the antients for writing muſical airs, were uſed till the eleventh century, when Guy d'Arezzo invented the modern manner of writing them with notes placed on different lines, ſo as to mark the ſound by the poſition of the note. Theſe notes were at firſt no more than points, in which there was nothing to expreſs the time or duration. But John de Meurs, born at Paris, and who lived in the reign of king John, found out the means of giving theſe points an unequal value, by the different figures of crotchets, minims, ſemi-briefs, quavers, ſemiquavers, &c. which he invented, and have ſince been adopted by all the muſicians of Europe.

SECT. V.

Whether the modern ſhould be preferred to the antient muſic.

THE famous difference in regard to the antients and moderns is very warm upon this point; becauſe, if the antient muſic was ignorant of the *Counterpoint*, or concert in different parts, that defect gives an indiſputable right of preference to the modern. Admitting this to be real, which may with great reaſon always remain doubtful, I am not ſure that the conſequence is ſo certain. Might not the antients, in all other reſpects, have carried muſic to a degree of perfection the moderns have not attained, as well as all the other arts? (I do not ſay it is ſo, I ſpeak only of its poſſibility;) and, if ſo, ought the diſcovery of the *Counterpoint* to give the latter an abſolute preference

to the former? The moſt excellent painters of antiquity, as Apelles, uſed only four colours in their pieces. This was ſo far from being a reaſon to Pliny for diminiſhing any thing of their merit and reputation, that he admired them the more for it, and that they had excelled all ſucceeding painters ſo much, though the latter had employed a great variety of new tints.

But, to trace this queſtion to the bottom, let us examine, whether the muſic of later times does actually and indiſputably excel that of the antients; and this it is impoſſible for us to decide. It is not with muſic as with ſculpture. In the latter, the cauſe may be tried by the evidence of the performances to be produced on both ſides. We have ſtatues and reliefs of the antients, which we can compare with our own; and we have ſeen Michael Angelo paſs ſentence in this point, and actually acknowledge the ſuperiority of the antients. No muſical work of theirs is come down to us, to make us ſenſible of its value, and to enable us to judge by our own experience, whether it be as excellent as our own. The wonderful effects, it is ſaid to have produced, do not ſeem proofs ſufficiently deciſive.

There are ſtill extant treatiſes on Didactics, as well Greek as Latin, which may lead us to the theory of this art: but can we conclude any thing very certain from them in regard to the practice of it? This may give us ſome light, ſome opening; but precepts are exceedingly remote from execution. Would treatiſes upon poetry alone ſuffice to inform us, whether the modern ought to be preferred to the antient poets?

In the uncertainty there will always be with regard to the matter in queſtion, there is a prejudice very much in favour of the antients, which ought, in my opinion, to make us ſuſpend our judgment. It is allowed, that the Greeks had wonderful talents for all arts; that they cultivated them with extra-

ordinary

ordinary ſucceſs, and carried moſt of them to a ſurpriſing degree of perfection. In architecture, ſculpture, and painting, no-body diſputes their ſupreme excellency. Now, of all theſe arts, there is not any ſo antiently or generally cultivated as muſic. This was not done only by a few private perſons, who made it their profeſſion, as in the other arts; but by all in general who had any care taken of their education, of which the ſtudy of muſic was an eſſential part. It was of general uſe in ſolemn feſtivals, ſacrifices, and eſpecially at meals, that were almoſt always attended with concerts, in which their principal joy and refinement conſiſted. There were public diſputes and prizes for ſuch as diſtinguiſhed themſelves moſt by it. It had a very peculiar ſhare in chorus's and tragedies. The magnificence and perfection, to which Athens roſe in every thing elſe that related to the public ſhews, is known: Can we imagine that city to have neglected only muſic? Can we believe, that thoſe Attic * ears, ſo refined and exquiſite in reſpect to the ſound of words in common diſcourſe, were leſs ſo in regard to the concerts of vocal and inſtrumental muſic, ſo much uſed in their chorus, and in which the moſt ſenſible and uſual pleaſure of Athens conſiſted? For my part, I cannot help being of opinion, that the Greeks, inclined as they were to diverſions, and educated from their earlieſt youth in a taſte for concerts, with all the aids I have mentioned, with that inventive and induſtrious genius they were known to have for all the arts, muſt have excelled in muſic as well as in all other arts. This is the ſole concluſion I make from all the reaſons I have advanced, without pretending to determine the preference in favour of either the antients or moderns.

I have not ſpoken of the perfection to which the Hebrew ſingers might have attained, in what re-

* Atticorum aures teretes & religioſæ. *Cic.*

gards

gards vocal and inſtrumental muſic, to avoid mingling a ſpecies entirely ſacred and devoted to religion, with one wholly profane and abandoned to idolatry, and all the exceſſes conſequential upon it. We may preſume that theſe ſingers, to whom the holy Scripture ſeems to aſcribe a kind of inſpiration and the gift of * prophecy, not to compoſe prophetic pſalms, but to ſing them in a lively and ardent manner, full of zeal and rapture, had carried the ſcience of ſinging to as great a perfection as was poſſible. It was, no doubt, a grand, noble, and ſublime kind of muſic, wherein every thing was proportioned to the majeſty of its object, the Godhead, who, we may add, was its author: for he had vouchſafed to form his miniſters and ſingers himſelf, and to inſtruct them in the manner it pleaſed him, to have his praiſes celebrated.

Nothing is ſo admirable as the order itſelf, which God had inſtituted amongſt the Levites for the exerciſe of this auguſt function. They were four thouſand in number, divided into different bodies, of which each had its chief; and the kind, as well as times, ſtated for the diſcharge of their reſpective duties. Two † hundred fourſcore and eight were appointed to teach the reſt to ſing and play upon inſtruments. We ſee an example of this wonderful order in David's diſtribution of the parts of the ſacred muſic, when he ſolemnized the carrying of the ark from the houſe of Obed-Edom into the citadel of Sion. The whole troop of muſicians were divided into three chorus's. The firſt had

* *And Chenaniah, chief of the Levites, was for ſong (or* PROPHECY:) *he inſtructed about the ſong, becauſe he was ſkilful,* 1 Chron. xv. 22.

David and the captains of the hoſt ſeparated to the ſervice of the ſons of Aſaph, and of Heman, and of Jeduthun, who ſhould PROPHESY *with harps, with pſalteries, and with cymbals, and the number of workmen according to their ſervice was:* 1 Chron. xxv. 1.

† —— *With their brethren that were inſtructed in the ſongs of the Lord, even all that were cunning, two hundred fourſcore and eight.* 1 Chron. xxv. 7.

hollow

hollow inſtruments of braſs, that reſounded exceedingly, unlike our kettle-drum, only in not being covered with ſkins, and having their hollow part laid over with double bars, which they ſtruck on different parts of them. Theſe ſounds ſuited very well the ſacerdotal trumpets that preceded them, and were very proper, by their lively, ſtrong, and broken iterations, to awake the attention of the ſpectators. The ſecond troop of ſacred ſingers played in the treble, or higher, key, on a different inſtrument. The third chorus conſiſted of baſes, that ſerved to exalt and ſuſtain theſe trebles, with which they always played in concert (*perhaps in uniſons*) becauſe directed by the ſame maſter of the ſingers.

It is eaſy to conceive, that the Levites, ſo numerous as they were, deſtined from father to ſon to this ſole exerciſe, taught by the moſt ſkilful maſters, and formed by long and continual habit, muſt have attained great excellency, and at length become conſummate in all the beauties and delicacies of an art, in which they paſſed their whole lives.

This was the true intent of muſic. The moſt noble uſe, that men can make of it, is to employ it in rendering the continual homage of praiſe and adoration to the ſupreme majeſty of God, who has created, and governs, the univerſe, and reſerves ſo ſacred an office for his faithful children. *Hymnus omnibus ſanctis ejus.*

ARTI-

ARTICLE II.

Of the parts of muſic peculiar to the antients.

I Shall treat in this ſecond article on the other parts of muſic in uſe amongſt the antients, but unknown amongſt us; and ſhall confound them often together, becauſe they have a natural connection, and it would be difficult to ſeparate them without falling into tedious repetitions. I ſhall make great uſe of what is ſaid upon theſe heads, in the critical reflections of the Abbé du Bos, upon poetry and painting.

SECT. I.

Speaking upon the ſtage, or theatrical declamation compoſed and ſet to notes.

THE antients compoſed and wrote with notes the declamation or manner of ſpeaking upon the ſtage, which, however, was not ſinging to muſic: and it is in this ſenſe we ſhould often underſtand in the Latin poets the words *canere*, *cantus*, and even *carmen*, which do not always ſignify ſinging properly ſo called, but a certain manner of ſpeaking or reading.

According to Bryennius, this declaiming or ſpeaking was compoſed with accents, and in conſequence it was neceſſary, in writing it, to make uſe of the characters, which expreſſed thoſe accents. At firſt they were only three, the acute, the grave, and the circumflex. They afterwards amounted to ten, each marked with a different character. We find their names and figures in the antient Grammarians. The accent is the certain rule by which the voice ſhould be raiſed or depreſſed in the pronunciation

nunciation of every ſyllable. As the manner of ſounding theſe accents was learnt at the ſame time with reading, there was ſcarce any body who did not underſtand this kind of notes.

Beſides the help of accents, the ſyllables in the Greek and Latin languages had a determinate quantity; that is to ſay, they were either long or ſhort. The * ſhort ſyllable had only one, and the long two ſeconds of time. This proportion between long and ſhort ſyllables was as abſolute, as that in theſe days between notes of different length. As two black notes in our muſic ought to have as much time, as one white one in the muſic of the antients, two ſhort ſyllables had neither more nor leſs than one long one. Hence, when the Greek or Roman muſicians were to compoſe any thing whatſoever, they had no more to do, in ſetting the time to it, than to conform to the quantity of the ſyllables, upon which they placed each note.

I cannot avoid obſerving here by the way, that it is a pity the muſicians amongſt us, who compoſe hymns and motets, do not underſtand Latin, and are ignorant of the quantity of words; from whence it often happens, that upon ſhort ſyllables, over which they ought to run lightly, they inſiſt and dwell a great while, as if they were long ones. This is a conſiderable fault, and contrary to the moſt common rules of muſic.

I have obſerved, that the declamation, or manner of ſpeaking, of the actors upon the ſtage, was compoſed and written in notes, which determined the tone it was proper to take. Amongſt many paſſages that demonſtrate this, I ſhall content myſelf with chuſing one from Cicero, where he ſpeaks of Roſcius, his cotemporary and intimate friend. Every body knows that Roſcius became a perſon

* Longam eſſe ducrum temporum, brevem unius, etiam pueri ſciunt. *Quintil.* l. 9. c. 4.

of

of very great consideration, by his singular excellency in his art, and his reputation for probity. The people were so much prejudiced in his favour, that, when he did not act so well as usual, they said it was either out of negligence or indisposition. *Noluit, inquiunt, agere Roscius, aut crudior fuit.* In fine, the highest degree * of praise, that they gave to a man, who excelled in his profession, was to say, he was a Roscius in his way.

Cic. de Orat. l. 1. n. 124.

Cicero, after having said that an orator, when he grows old, might soften his manner of speaking, quotes, as a proof and example of it, what Roscius declared, that, when he perceived himself grow old, he obliged the instruments to play in a slower time: *Quanquam, quoniam multa ad oratoris similitudinem ab uno Artifice sumimus, solet idem Roscius dicere, se, quo plus sibi ætatis accederet, eo tibicinis cantus & modos remissiores esse facturum.* Cicero accordingly, in a later work than that I have now cited, makes Atticus say, that actor had abated his declamation, or manner of speaking, by obliging the player on the flute, that accompanied him, to keep a slower time with the sounds of his instrument: *Roscius, familiaris tuus, in senectute numeros & cantus remiserat, ipsaque tardiores fecerat tibias.*

De Orat. l. 1. n. 254.

Cic. de Leg. l. 1. n. 11.

It is evident, that the *singing* (for it was often called so) of the dramatic pieces on the stages of the antients had neither divisions, recitative, continued quaverings, nor any of the characters of our musical singing: in a word, that this singing was only declaiming or speaking as with us. This manner of utterance was, however, composed, as it was sustained by a continued base, of which the sound was proportioned, in all appearance, to that made by a man who declaims or pronounces a speech.

* Jam diu consecutus est ut in quo quisque artificio excelleret, is in suo genere Roscius diceretur. *De Orat.* l. 1. n. 130.

This

This may seem to us an absurd and almost incredible practice, but is not therefore the less certain; and, in matter of fact, it is useless to object any arguments. We can only speak by conjecture upon the composition which the continued base might play, that accompanied the actor's pronunciation. Perhaps it only played from time to time some long notes, which were heard at the passages, in which it was necessary for the actor to assume such tones as it was not easy to hit with justness; and thereby did the speaker the same service, as Gracchus received from the player upon the flute he always had near him, when he harangued, to give him at proper times the tones concerted between them.

SECT. II.

Gesture of the stage composed and set to music.

MUSIC did not only regulate the tone of voice in speaking, but also the gesture of the speaker. This art was called ὄρχησις by the Greeks, and *Saltatio* by the Romans. Plato tells us, that this art consisted in the imitation of all the gestures and motions men can make. Hence we must not confine the sense of *Saltatio* to what our language means by the word *dancing*. This art, as the same author observes, was of great extent. It was designed not only to form the attitudes and motions which add grace to action, or are necessary in certain artificial dances, attended with variety of steps, but to direct the gesture, as well of the actors upon the stage, as the orators; and even to teach that manner of gesticulation we shall soon treat on, which conveyed meaning without the help of speech. Plat. de Leg. l. 7. p. 814.

Quin-

Quintilian * adviſes the ſending of children, only for ſome time, to the ſchools where this art of *Saltation* was taught; but ſolely to acquire an eaſy air and graceful action; and not to form themſelves upon the geſture of dancing-maſters, to which that of orators ſhould be extremely different. He obſerves, that this cuſtom was very antient, and had ſubſiſted to his times without any objection.

Macrobius, however, has preſerved a fragment of a ſpeech of the younger Scipio Africanus, wherein that deſtroyer of Carthage ſpeaks warmly againſt this cuſtom. "Our youth, ſays he†, go "to the ſchools of the comedians to learn ‡ ſing- "ing, an exerciſe, which our anceſtors conſidered "as unworthy of perſons of condition. Young "perſons of both ſexes go thither without bluſh- "ing, where they mingle with a crowd of the "moſt looſe and abandoned minſtrels." The authority of ſo wiſe a man as Scipio is of great weight on this head, and well deſerves ſerious attention.

However it was, we find, that the antients took extraordinary pains to cultivate geſture, and both comedians and orators were very careful in this point. We have ſeen how induſtriouſly Demoſthenes applied himſelf to it. ‖ Roſcius ſometimes diſputed with Cicero, who beſt expreſſed the ſame thought in ſeveral different manners, each in his

* Cujus etiam diſciplinæ uſus in noſtram uſque ætatem ſine reprehenſione deſcendit. A me autem autem non ultra pueriles annos retinebitur, nec in his ipſis diu. Neque enim geſtum oratoris componi ad ſimilitudinem ſaltatoris volo, ſed ſubeſſe aliquid ex hac exercitatione. *Quintil.* l. 1. c. 11.

† Eunt in ludum hiſtrionum, diſcunt cantare quod majores noſtri ingenuis probro duci voluerunt. Eunt, inquam, in ludum ſaltatorium inter Cinædos, virgines puerique ingenui. *Macrob. Saturnal.* l. 2. c. 8.

‡ *As comedians are ſpoken of here, by the word* cantare *we muſt underſtand to ſpeak or declaim after the manner of the theatre.*

‖ Et certè ſatis conſtat contendere cum (Ciceronem) cum hiſtrione ſolitum, utrum ille ſæpius eandem ſententiam variis geſtibus efficeret, an ipſe per eloquentiæ copiam ſermone diverſo pronunciaret. *Macrob. Saturn.* l. 2. c. 10.

own

own art; Roſcius by geſture, and Cicero by ſpeech. Roſcius ſeems to have repeated that only by geſture, which Cicero firſt compoſed and uttered; after which judgment was given upon the ſucceſs of both. Cicero afterwards changed the words or turn of phraſe, without enervating the ſenſe of the diſcourſe; and Roſcius, in his turn, was to give the ſenſe by other geſtures, without injuring his firſt mute expreſſion by the change of manner.

SECT. III.

Pronunciation and geſture divided upon the ſtage between two actors.

WE ſhall be leſs ſurpriſed at what I have ſaid concerning Roſcius, when we know, that the Romans often divided the theatrical Pronunciation between two actors, of whom the one pronounced, while the other made geſtures. This again is one of the things not eaſily conceived, ſo remote is it from our practice, and ſo extravagant therefore does it appear.

Livy tells us the occaſion for this cuſtom. Livius Andronicus *, a celebrated poet, who firſt gave Rome a regular dramatic piece, in the five hundred and fourteenth year of that city, about an hundred and twenty years after ſhews of that kind had been introduced there, acted himſelf in one of his own pieces. It was uſual at that time for the dramatic poets to mount the ſtage, and repreſent ſome character. The people, who took the liberty to cauſe

* Livius—idem ſcilicet, quod omnes tunc erant ſuorum carminum, actor dicitur, cum ſæpius revocatus vocem obtudiſſet, veniâ petitâ puerum ad canendum ante tibicinem cùm ſtatuiſſet, canticum egiſſe aliquanto magis viginti motu quia nihil vocis uſus impediebat. Inde ad manum cantari hiſtrionibus cœptum, diverbiaque tantùm ipſorum voce relicta. *Liv.* l. 7. n. 2.

Is (Livius Andronicus) ſui operis actor, cum ſæpius à populo revocatus vocem obtudiſſet, adhibito pueri & tibicinis concentu, geſticulationem tacitus peregit. *Val. Max.* l. 2. c. 4.

the paſſage they liked to be repeated, by calling out *bis*, that is to ſay *encore*, made Andronicus repeat ſo long, that he grew hoarſe. Not being capable of pronouncing any longer, he prevailed upon the audience to let a ſlave, placed behind the performer upon the inſtruments, repeat the verſes, whilſt Andronicus made the ſame geſtures, as he had done in repeating them himſelf. It was obſerved, that his action was at that time much more animated than before, becauſe his whole faculties and attention were employed in the geſticulation, whilſt another had the care and trouble of pronouncing the words. From that time, continues Livy, aroſe the cuſtom of dividing the parts between two actors; and to pronounce, in a manner, to the cadence of the comedian's geſture. And this cuſtom has prevailed ſo much, that the comedians themſelves pronounce no longer any thing beſides the dialogue part. Valerius Maximus relates the ſame thing, which paſſages in many other authors confirm.

It is therefore certain, that the pronunciation and geſture were often divided between two actors; and that it was by eſtabliſhed rules of muſic they regulated both the ſound of their voices, and the motion of their hands and whole body.

We ſhould be ſtruck with the ridicule there would be in two perſons upon our ſtage, of whom, one ſhould make geſtures without ſpeaking, whilſt the other repeated in a pathetic tone without motion. But we ſhould remember, in the firſt place, that the theatres of the antients were much more vaſt than ours; and in the ſecond place, that the actors played in maſks, and that in conſequence one could not diſtinguiſh ſenſibly, at a great diſtance, whether they ſpoke or were ſilent by the moving of the mouth, or the features of the face. They undoubtedly choſe a *ſinger* (I mean him who pronounced) whoſe voice came as near as poſſible

to

to that of the comedian. This finger was placed in a kind of alcove, towards the bottom of the ſcene.

But in what manner could the rythmic muſic adapt itſelf to the ſame meaſure and cadence with the comedian that repeated, and him who made geſtures? This was one of thoſe things that, St. Auguſtin ſays, were known to all who mounted the ſtage, and for that reaſon he believed improper for him to explain. It is not eaſy to conceive what method the antients uſed to make both theſe players act in ſo perfect a concert, as ſcarce to be diſtinguiſhed from one: but the fact is certain. We know that the meaſure was beat upon the ſtage, which the actor who ſpoke, he who made geſtures, the chorus, and even the inſtruments, were to obſerve as their common rule. * Quintilian, after having ſaid, that geſture is as much ſubſervient to meaſure, as utterance itſelf, adds, that the actors, who geſticulate, ought to follow the ſigns given with the foot, that is to ſay, the time beat, with as much exactneſs, as thoſe who execute the modulations; by which he means the actors who pronounce, and the inſtruments that accompany them. Near the actor who repreſented, a man was placed with iron ſhoes, who ſtamped upon the ſtage. It is natural to ſuppoſe, that this man's buſineſs was to beat the time with his foot, the ſound of which was to be heard by all who were to obſerve it. Lucian in Orcheſt. p. 951.

The extreme delicacy of the Romans (and as much may be ſaid of the Greeks) in whatever concerned the theatre, and the enormous expences they were at in repreſentations of this kind, give us reaſon to believe, that they carried all parts of them to a very great perfection; and in conſequence that the diſtribution of ſingle parts between two actors,

* Atqui corporis motui ſua quædam tempora, & ad ſigna pedum non minus ſaltationi, quam modulationibus, adhibet ratio muſica numeros. *Quintil.*

of which one ſpoke, and the other made geſtures, had nothing in it, that was not highly agreeable to the ſpectators.

A comedian * at Rome, who made a geſture out of time, was no leſs hiſſed than one who was faulty in the pronunciation of a verſe. † The habit of being preſent at the public ſhews, had made even the common people ſo nice in their ear, that they knew how to object to inflexions, and the moſt minute faults in tone, when repeated too often; even though they were of a nature to pleaſe, when introduced ſparingly, and managed with art.

The immenſe ſums devoted by the antients to the celebration of ſhews are hardly credible. The repreſentation of three of Sophocles's tragedies coſt the Athenians more than the Peloponneſian war. What expences were the Romans at in building theatres and amphitheatres, and even in paying their actors? Æſopus, a celebrated actor of tragedy, Cicero's cotemporary, left at his death to the ſon, mentioned by Horace and Pliny as a famous ſpendthrift, an inheritance ‡ of two millions, five hundred thouſand livres, (about an hundred and twenty thouſand pounds) which he had amaſſed by acting. ‖ Roſcius, Cicero's friend, had a ſalary of above ſeventy-five thouſand livres (about three thouſand five hundred pounds) a year, and muſt have had more, as he had § five hundred livres (about twenty-three pounds) a day out of the pub-

Hor. Sat. l. 2. Plin. l. 10. c. 51.

* Hiſtrio ſi paululum ſe moveat extra numerum, aut ſi verſus pronunciatus eſt ſyllaba una longior aut brevior, exſibilatur & explioditur. *Cic. in Farad.* 3.

† Quanto molliores ſunt & delicatiores in cantu flexiones & falſæ voculæ quam certæ & ſeveræ: quibus tamen non modo auſteri, ſed, ſi ſæpius fiant, multitudo ipſa reclamat. *Cic. de Orat.* l. 3. n. 98.

‡ Æſopum ex pari arte ducenties ſeſtertium reliquiſſe filio conſtat. *Macrob.* l. 2. c. 10.

‖ Quippe cum jam apud majores noſtros Roſcius hiſtrio ſeſtertium quinquaginta millia annua meritaſſe prodatur. *Plin.* l. 7. c. 39.

§ Tanta fuit gratia, ut merced m diurnam de publico mille denarios ſine gregalibus ſolus acceperit. *Macrob. Saturn.* l. 2. c. 10.

lic

lic treasury, of which he paid no part to his company. Julius Cæsar gave above sixty thousand livres (about two thousand seven hundred and fifty pounds) to Laberius, to induce that poet to play a part in a piece of his own composing. Macrob. Saturn. l. 2. c. 7.

I have repeated these facts, and there are an infinity of a like nature, to shew the exceeding passion of the Romans for public shews. Now is it probable, that a people who spared nothing for these shews, who made them their principal employment, or at least their most sensible pleasure; who piqued themselves upon the elevation and refinement of their taste in every thing beside; that this people, I say, whose delicacy could not suffer the least word ill pronounced, the least accent ill laid, or the least improper gesture, should admit this distribution of speech and gesture between two actors, so long upon the stage, if it had offended ever so little the eye or ear? We may believe, without prejudice, that a theatre, so much esteemed and frequented, had carried all things to a very high degree of perfection.

It was the music, that engrossed almost all honour in dramatic representations. It presided in the composition of plays: for of old its empire extended so far, and was confounded with poesy. It regulated the speech and gesture of the actors. It was applied to form the voice, to unite it with the sound of the instruments, and to compose a grateful harmony out of that union.

In antient Greece the poets themselves composed the pronunciation for their pieces. *Musici, qui erant quondam idem poetæ*, says Cicero, in speaking of the antient Greek poets who invented the music and form of verses. The art of composing declamation, or the pronunciation for dramatic performances, was a particular profession at Rome. In the titles at the head of Terence's comedies, we find, with the name of the author of the poem, Cic. de Orat. l. 3. n. 174.

and that of the maſter of the company of comedians who acted it, his name alſo that had adapted the muſic to the words; in Latin, *Qui fecerat modos.*

Cicero uſes the ſame expreſſion, *facere modos*, to expreſs thoſe who compoſed the pronunciation of theatrical pieces. After having ſaid, that Roſcius purpoſely repeated ſome paſſages of his parts with a more negligent tone than the ſenſe of the verſes ſeemed to require, and threw ſhadowings into his geſture, to make what he intended to ſet off the ſtronger, he adds: "That the * ſucceſs of this conduct is ſo certain, that the poets, and thoſe who compoſed the pronunciation, were ſenſible of it as well as the comedians, and knew all of them how to employ it with advantage." Theſe compoſers of pronunciation raiſed or depreſſed the tone with deſign, and artfully varied the manner of ſpeaking. A paſſage was ſometimes directed by the note, to be pronounced lower than the ſenſe ſeemed to require, but then it was, becauſe the elevation to which the actor's voice was to raiſe, at the diſtance of a verſe or two, might have the ſtronger effect.

SECT. IV.

Art of the Pantomimes.

TO conclude what relates to the muſic of the antients, it remains for me to ſpeak of the moſt ſingular and wonderful of all its operations, though neither the moſt uſeful nor the moſt laudable: this was the performance of the Pantomimes.

* Neque id actores prius viderunt, quam ipſi poetæ, quam denique illi etiam qui fecerunt modos, a quibus utriſque ſubmittitur aliquid, deinde augetur, extenuatur, inflatur, variatur, diſtinguitur. *Cic. de Orat.* l. 3. n. 1, 2.

The

The antients, not contented with having reduced, by the precepts of muſic, the art of geſture into method, had improved it to ſuch a degree, that there were comedians who ventured to undertake to act all ſorts of dramatic pieces, without ſpeaking a ſyllable. They called themſelves *Pantomimes*, becauſe they *imitated* and expreſſed *whatever* they had to ſay by geſtures, taught by the art of *Saltation* or dancing, without uſing the aid of ſpeech.

Suidas and Zozymus inform us, that the art of the Pantomimes made its firſt appearance at Rome, in the reign of Auguſtus; which made Lucian ſay, that Socrates had ſeen the art of *dancing* only in its cradle. Zozymus even reckons the invention of this art amongſt the cauſes of the corruption of the manners of the Roman people, and of the misfortunes of the empire. The two firſt introducers of this new art were Pylades and Bathyllus, whoſe names became afterwards very famous amongſt the Romans; the firſt ſucceeded beſt in tragic ſubjects, and the other in comic.

Suidas. Ἀθηνοδ. Zoz. l. 1. Lucian. de Orcheſt. p. 923.

What appears ſurpriſing is, that theſe comedians, who undertook to perform pieces without ſpeaking, could not aſſiſt their expreſſion with the motion of their faces; for they played in maſks as well as the other actors. They began, no doubt, at firſt by executing ſome well known ſcenes of tragedies and comedies, in order to be the more eaſily underſtood by the ſpectators, and by little and little became capable of repreſenting whole plays.

As they were not to repeat any thing, and had only geſtures to make, it is eaſily conceived, that all their expreſſion was more lively, and their action much more animated, than thoſe of the common comedians. Hence * Caſſiodorus calls the Pan-

* Orcheſtrarum loquaciſſimæ manus, linguoſi digiti ſilentium clamoſum, expoſitio tacita, quam muſa Polhymnia reperiſſe narratur, oſtendens homines poſſe ſine oris afflatu velle ſuum declarare. *Caſſiod. Var. Epiſt.* l. 4. *Epiſt.* 51.

tomimes, men whose learned hands, to use that expression, had tongues at the end of each finger; who spoke in keeping silence, and who knew how to make an ample narration without opening their mouths: in fine, men whom Polhymnia, the muse that presided over music, had formed, in order to shew that she could express her sense without the help of speech.

These representations, though mute, must have given a sensible pleasure, and transported the spectators. Seneca the father, whose profession was one of the gravest and most honourable of his times, confesses, that his taste for these Pantomimical representations was a real passion. Lucian says, that people wept at them, as at the pieces of the speaking comedians. He relates also, that some king in the neighbourhood of the Euxine sea, who was at Rome in Nero's reign, demanded of that prince, with great earnestness, a Pantomime, he had seen play, in order to make him his interpreter in all languages. "This man, said he, will make all "the world understand him, whereas I am obliged "to pay a great number of interpreters for corre- "sponding with my neighbours, who speak several "languages entirely unknown to me."

Senec. in Controv. 2.

Lucian de Orchest. p. 948. Ibid. 940.

Certain it is, that the Romans were so charmed with the art of the Pantomimes from its birth, that it soon passed into the remotest provinces, and subsisted as long as the empire itself. The history of the Roman emperors more frequently mentions famous Patomimes than celebrated orators.

This art, as we have observed, began in the reign of Augustus. That prince was exceedingly delighted with it, and Mæcenas was in a manner inchanted with Bathyllus. * In the first year of Tiberius, the senate was obliged to make a regulation to prohibit the senators from entering the houses

* Ne domos Pantomimorum senator introiret, ne egredientes in publicum Equites Romani circumsederent. *Tacit. Annal.* l. 1. c. 77.

of

of the Pantomimes, and the Roman knights from making up their train in the ſtreets. Some years after, there was a neceſſity for baniſhing the Pantomimes out of Rome. The extreme paſſion of the people for their repreſentations occaſioned the forming cabals for applauding one in preference to another, and theſe cabals became factions. They even took different liveries, in imitation of thoſe who drove the chariots in the races of the Circus. Some called themſelves the *Blues*, and others the *Greens*. The people were divided alſo on their ſide, and all the factions of the Circus, ſo frequenly mentioned in the Roman hiſtory, eſpouſed different companies of Pantomimes, which often occaſioned dangerous tumults in Rome.

Lucian de Orcheſt. l. 4. c. 14.

Caſſiod. Var. Epiſt. l. 1. Epiſt. 20.

The Pantomimes were again expelled Rome under Nero and ſome other emperors. But their baniſhment was of no great duration; becauſe the people could no longer be without them, and conjunctures happened, in which the ſovereign, who believed the favour of the multitude neceſſary to him, endeavoured to pleaſe them by ſuch means as were in his power. Domitian had expelled them, and Nerva his ſucceſſor recalled them, though one of the wiſeſt emperors Rome ever had. Sometimes the people themſelves, tired with the unhappy effects of the cabals of the Pantomimes, demanded their expulſion with as much warmth as they had done their being recalled upon other occaſions. *Neque a te minore concentu ut tolleres Pantomimos, quam a patre tuo ut reſtitueret, exactum eſt*, ſays Pliny the younger, in ſpeaking to Trajan. There are evils and diſorders, which can only be prevented in their birth, and which, if time be allowed them to take root and gain credit, aſſume the upper hand, and become too ſtrong for all remedies.

THE

THE HISTORY OF THE ARTS and SCIENCES OF THE ANCIENTS, &c.

OF THE ART MILITARY.

HITHERTO we have seen man established by the means of the arts in the enjoyment of all the conveniencies of life. The earth, cultivated by his care and labour, has supplied him, in return, with abundant riches of every kind. Commerce has brought him, from the most remote countries, whatever their inhabitants could spare: it has carried him down into the bowels of the earth, and to the bottom of the sea, not only to inrich and adorn him, but to supply himself with an infinity of helps and instruments necessary in his daily occasions. After having built himself houses, sculpture and painting have done their utmost in emulation of each other to adorn his abode; and, that nothing might be wanting to his satisfaction and delight, music has come in, to fill up his moments of leisure with grateful concerts, which rest and refresh him after his labours, and make him forget all his pains, and all his afflictions, if he

he has any. What more can he desire? Happy, if he could not be disturbed in the possession of advantages, that have cost him so much. But the rapacious appetites, the avarice and ambition of mankind, interrupt this general felicity, and render man the enemy of man. Injustice arms herself with force, to inrich herself with the spoils of her brethren. He, who, moderate in his desires, confines himself within the bounds of what he possesses, and should not oppose force with force, would soon become the prey of others. He would have cause to fear, that jealous neighbours, and enemy states, would come to disturb his tranquillity, to ravage his lands, burn his houses, carry away his riches, and lead himself into captivity. He has therefore occasion for arms and troops, to defend him against violence, and ascertain his safety. At first we behold him employed in whatever the sciences have of most exalted and sublime: but, * at the first noise of arms, those sciences, born and nurtured in repose, and enemies of tumult, are seized with terror, reduced to silence, unless the art of war takes them under her protection, and places her safeguards over them, which can alone secure the public tranquillity. † Thus war becomes necessary to man, as the protectress of peace and repose, and solely employed to repel violence and defend justice; and it is in this light I believe it allowable for me to treat of it. I shall run over, as briefly as possible, all the parts of military knowledge, which, properly speaking, is the science of princes and kings, and requires, for succeeding in it, almost innumerable talents, which are very rarely to be found united in the same person.

* Omnia hæc nostra præclara studia——latent in tutela ac præsidio bellicæ virtutis. Simul atque increpuit suspicio tumultûs, artes illico nostræ conticescunt. *Cic. pro Mur.* n. 21.

† Suscipienda bella sunt ob eam causam ut sine injuria in pace vivatur. *Cic.* l. 1. *de Offic.* n. 35.

As

As I have elſewhere treated on what relates to the military affairs of the Egyptians, Carthaginians, Aſſyrians, and Perſians, I ſhall ſpeak the more ſparingly of them in this place. I ſhall be more extenſive upon the Greeks, and principally the Lacedæmonians and Athenians, which, of all the Grecian ſtates, indiſputably diſtinguiſhed themſelves moſt by their valour and military knowledge. I was long in doubt whether I ſhould ſpeak alſo of the Romans, who ſeem foreign to my ſubject. But, upon mature conſideration, I thought it neceſſary to join them with other nations, that the reader, at one view, might know, at leaſt in ſome meaſure, the manner in which the antients made war. This is the ſole end I propoſe to myſelf in this little treatiſe, without intending any thing further. I have not forgot what happened to a philoſopher of Epheſus, who paſſed for the fineſt ſpeaker of his times. In an harangue, which he pronounced before Hannibal, he took upon him to treat at large on the duties of a good general. The orator was applauded by the whole audience. Hannibal, being preſſed to give his opinion of him, replied, with the freedom of a ſoldier, that he had never heard a more contemptible diſcourſe. I ſhould apprehend incurring a like cenſure, if, after having paſſed my whole life in the ſtudy of polite learning, I ſhould pretend to give leſſons upon the art military to thoſe who make it their profeſſion.

CHAP.

CHAPTER I.

THIS firſt chapter contains what relates to the undertaking and declaring of war, the choice of the general and officers, the raiſing of troops, their proviſions, pay, arms, march, incampment, and all that relates to battles.

ARTICLE I.

Undertaking and declaration of war.

SECT. I.

Undertaking of war.

THERE is no principle more generally received, than that which lays down, that war ought never to be undertaken except for juſt and lawful reaſons; nor hardly any one more generally violated. It is agreed, that wars *, undertaken ſolely from views of intereſt or ambition, are real robberies. The pirate's anſwer to Alexander the Great, ſo well known in hiſtory, was exceedingly juſt and ſenſible. And had not the Scythians good reaſon to aſk that ravager of provinces †, wherefore he came ſo far to diſturb the tranquillity of nations, who had never done him wrong; and whether

* Inferre bella finitimis—ac populos ſibi non moleſtos ſola regni cupiditate conterere & ſubdere, quid aliud quam grande latrocinium nominandum eſt? *S. Aug. de Civ. D.* l. 4. c. 6.

† Quid nobis tecum eſt? Nunquam terram tuam attigimus. Qui ſis, unde venias, licetne ignorare in vaſtis ſylvis viventibus? *Q. Curt.* l. 7. c. 8.

it

it was a crime in them to be ignorant in their woods and deſarts, remote from the reſt of mankind, who and of what country Alexander was? When Philip*, Juſtin. l. 8. choſen arbiter between two kings of Thrace that c. 3. were brothers, expelled them both from their dominions, did he deſerve a better name than that of thief and robber? His other conqueſts, though leſs flagrant crimes, were ſtill but robberies, becauſe founded upon injuſtice, and no means of conquering ſeemed infamous to him: *Nulla apud* Id. Juſtin. *eum turpis ratio vincendi.* The juſtice and neceſſity of wars ought therefore to be conſidered as fundamental principles in point of policy and government.

In monarchical ſtates, generally, the prince only has power to undertake a war: which is one of the reaſons that renders his office ſo much to be feared. For, if he has the misfortune to enter into it without a juſt and neceſſary cauſe, he is anſwerable for all the crimes committed in it, for all the fatal effects attending it, for all the ravages inſeparable from it, and and all the human blood ſhed in it. Who can look without trembling upon ſuch an object, and an account of ſo dreadful a nature?

Princes have councils, which may be of great aſſiſtance to them, if they take care to fill them up with wiſe, able, and experienced perſons; ſuch as are diſtinguiſhed by their love and zeal for the good of their country, void of ambition views of intereſt, and above all infinitely remote from all diſguiſe and flattery. When Darius propoſed to his Herod. l. 4. council the carrying of the war into Scythia, Arta- c. 83. banus his brother endeavoured at firſt in vain to diſſuade him from ſo unjuſt and unreaſonable a deſign: his reaſons, ſolid as they were, were forced to give way to the enormous praiſes and exceſſive flattery

* Philippus, more ingenii ſui, ad judicium veluti ad bellum, inopinantibus fratribus, inſtructo exercitu ſupervenit; & regno utrumque, non judicis more, ſed fraude LATRONIS ac ſcelere, ſpoliavit.

of

Herod. l. 7. c. 18. of the courtiers. He succeeded no better in the counsel he gave his nephew Xerxes, not to attack the Greeks. As the latter had strongly expressed his own inclination, an essential fault in such conjunctures, he was far from being opposed, and the deliberation was no more than mere form. On both occasions, the wise prince, who had spoken his sentiments freely, was grieved to see, that neither of the two kings comprehended, * *how great a misfortune it is to be accustomed to set no bounds to one's desires, never to be contented with what we possess, and always to be sollicitous for enlarging it:* which is the cause of almost all wars.

In the Grecian republics, the assembly of the people decided finally with regard to war, which method was subject to great inconveniencies. At Sparta indeed, the authority of the senate, and especially of the Ephori, as well as at Athens that of the Areopagus and council of four hundred, to whom the preparing of the public affairs belonged, served as a kind of balance to the levity and imprudence of the people: but this remedy had not always its effect. The Athenians are reproached with two very opposite faults, the being either too precipitate or too slow. Against the former a law had been made, by which it was ordained, that war should not be resolved till after a mature deliberation of three days. And in the wars against Philip we have seen, how much Demosthenes complained of the indolence of the Athenians, of which their enemy well knew how to make his advantage. This slowness, in republics, arises from this cause; unless the danger be evident, private persons are too much divided about their different views and interests, to unite speedily in the same resolution. Thus, when Philip had taken Elatæa, the Athenian orator, terrified with the urgent danger of the re-

* Ὡς κακὸν εἴη διδόσκειν τὴν ψυχὴν ὅλον τι δίζεσθαι ἀεὶ ἔχειν τῶ πλέονι.

public,

public, caused the law I have mentioned to be repealed, and the war to be resolved on that instant.

The public affairs were examined and determined with much more maturity and wisdom amongst the Romans, though the people with them also had the decision. But the senate's authority was great, and almost always prevailed in important cases. That wise body were very attentive, especially in the earliest times of the republic, to have justice on their side in their wars. This reputation, for faith in treaties, equity, justice, moderation, and disinterestedness, was of no less service than the force of arms, in aggrandizing the Roman republic; the power of which was attributed * to the protection of the gods, who rewards justice and public faith in that manner. It is observed † with admiration, that the Romans, in all times, constantly made religion the basis of their enterprises, and referred the motive and end of them to the gods.

The most powerful reason the generals could use to animate the troops to fight well, was to represent to them, that the war they made was just; and that, as only necessity had put their arms into their hands, they might assuredly rely upon the protection of the gods: whereas those gods, the enemies and avengers of injustice, never failed to declare against such as undertook unjust wars, in violation of the faith of treaties.

* Favere pietati fideique deos, per quæ populus Romanus ad tantum fastigii pervenerit. *Liv.* l. 44. n. 1.

† Majores vestri omnium magnarum rerum & principia exorsi ab iis sunt, & finem eum statuerunt. *Liv.* l. 45. n. 39.

SECT. II.

Declaration of war.

ONE effect of the principles of equity and juſtice, which I have now laid down, was never actually to commence hoſtilities, before the public heralds had ſignified to the enemy the grievances they had to alledge againſt them, and they had been exhorted to redreſs the wrongs declared to have been received. It is agreeable to the law of nature to try methods of amity and accommodation, before proceeding to open rupture. War is the laſt of remedies, and all others ſhould be endeavoured before that is undertaken. Humanity requires, that room be given for reflection and repentance, and time left to clear up ſuch doubts, and remove ſuch ſuſpicions, as meaſures of an ambiguous nature may give birth to, and which are often found to be groundleſs upon a nearer examination.

This cuſtom was generally obſerved from the earlieſt ages amongſt the Greeks. * Polynices, before he beſieged Thebes, ſent Tydeus to his brother Eteocles to propoſe an accommodation. And it appears from Homer, that the Greeks deputed Ulyſſes and Menelaus to the Trojans, to ſummon them to reſtore Helen, before they had committed any act of hoſtility; and Herodotus tells us the ſame thing. We find a multitude of the like examples throughout the hiſtory of the Greeks.

Iliad. l. 2. n. 205.

Lib. 2. c. 112, &c.

It is true, that an almoſt certain means of gaining great advantages over enemies is to fall on them at unawares, and to attack them ſuddenly, without

* Potior cunctis ſedit ſententia, fratris
Prætentare fidem, tutoſque in regna precando
Explorare aditus. Audax ea munera Tydeus
Sponte ſubit. *Stat. Theb.* lib. 11.

having

having ſuffered them to diſcover our deſigns, or giving them time to put themſelves into a ſtate of defence. But theſe unforeſeen incurſions, without any previous denunciation, were properly deemed unjuſt enterpriſes, and vicious in their principle. It was this, as Polybius remarks, that had ſo much diſcredited the Ætolians, and had rendered them as odious as thieves and robbers; becauſe having no rule but their intereſt, they knew no laws either of war or peace, and every means of inriching and aggrandizing themſelves appeared legitimate to them, without troubling themſelves, whether it were contrary to the law of nations to attack neighbours by ſurpriſe, who had done them no wrong, and who believed themſelves ſafe in virtue, and under the protection of treaties. Polyb. l. 4. p. 331.

The Romans were more exact than the Greeks in obſerving this ceremony of declaring war, which was eſtabliſhed by Ancus Martius, the fourth of their kings. The public officer (called *Fecialis*) having his head covered with linen, went to the frontiers of the people againſt whom preparations of war were making; and as ſoon as he arrived there, he declared aloud the grievances of the Roman people, and the ſatisfaction he demanded for the wrongs which had been done them; calling Jupiter to witneſs in theſe terms, which include an horrible imprecation againſt himſelf, and a ſtill greater againſt the people, of whom he was no more than the voice: *Great God, if I come hither to demand ſatisfaction in the name of the Roman people, contrary to equity and juſtice, never ſuffer me to behold my native country again.* He repeated the ſame thing, changing only ſome of the terms, to the firſt perſon he met; and afterwards at the entrance of the city, and in the public market-place. If at the expiration of thirty days ſatisfaction were not made, the ſame officer returned to the ſame people, and pronounced publicly theſe words: *Attend, oh Jupiter,* Liv. l. 1. n. 32.

Juno, and Quirinus; and you celeſtial, terreſtrial, and infernal gods, attend. I call you to witneſs, that ſuch a people* (naming them) *are unjuſt, and refuſes to make us ſatisfaction. We ſhall conſult at Rome, in the ſenate, upon the means of obliging them to do us that juſtice which is our due.* Upon the return of the Fecialis to Rome, the affair was brought into deliberation, and, if the majority of voices were for the war, the ſame officer went back to the frontier of the ſame people, and in the preſence of at leaſt three perſons, pronounced a certain form of declaration of war; after which he threw a ſpear upon the enemy's lands, which implied that the war was declared.

This ceremony was long retained by the Romans. When war was to be declared againſt Philip and Antiochus, they conſulted the Feciales, to know, whether it was to be denounced to themſelves in perſon, or it ſufficed to declare it in the firſt place ſubject to thoſe princes. In the glorious times of the † republic, they would have thought it a diſgrace to them to have acted by ſtealth, and to have committed breach of faith, or even uſed artifice. They proceeded openly, and left thoſe little frauds and unworthy ſtratagems to the Carthaginians, and people like them, with whom it was more glorious to deceive, than conquer an enemy with open force.

The heralds at arms, and Feciales, were in great veneration amongſt the antients, and were conſidered as ſacred and inviolable perſons. This declaration was a part of the law of nations, and was held neceſſary and indiſpenſable. It was not preceded by certain public writings, now called

* *So Romulus was called.*

† Veteres & moris antiqui memores negabant ſe in ea legatione Romanas artes agnoſcere. Non per inſidias & nocturna præliа— nec ut magiſtratu quam vera virtute gloriarentur, bella majores geſſiſſe: Inducere priuſquam gerere ſolitos bella, denunciare etiam — hæc Romana eſſe, non verſutiarum Punicarum, neque callidiatis Græcæ: apud quos fallere hoſtem, quam vi ſuperare, glorioſius fuerit. *Liv.* l. 42. n. 47.

Manifeſtes,

Manifeſtoes, which contain the pretenſions, well or ill founded, of the one or the other party, and the reaſons by which they ſupport them. Theſe have been ſubſtituted in the room of that auguſt and ſolemn ceremony, by which the antients introduced the divine Majeſty in delarations of war, as witneſs and avenger of the injuſtice of thoſe who undertook wars without reaſon and neceſſity. Motives of policy have beſides rendered theſe manifeſtoes neceſſary, in the ſituation of the princes of Europe with regard to each other, united by blood, alliances and leagues offenſive or defenſive. Prudence requires the prince, who declares war againſt his enemy, to avoid drawing upon him the arms of all the allies of the power he attacks. It is to prevent this inconvenience manifeſtoes are made in theſe days, which ſupply the place of the antient ceremonies I have mentioned, and which ſometimes contain the reaſons for beginning the war, without declaring it.

I have ſpoken of pretenſions well or ill founded. For ſtates and princes, who war upon each other, do not fail to juſtify their proceedings with ſpecious pretexts on both ſides; and they might expreſs themſelves, as a prætor of the Latins did in an aſſembly, wherein it was deliberated how to anſwer the Romans, who, upon the ſuſpicion of a revolt, had cited the magiſtrates of Latium before them. "In my opinion, gentlemen, ſays he, in the preſent conjuncture, we ought to be leſs concerned about what we have to ſay, than what we have to do: for, when we have acted with vigour, and duly concerted our meaſures, there will be no difficulty in adapting words to them." *Ad ſummam rerum noſtrarum magis pertinere arbitror, quid agendum nobis, quam quid loquendum ſit. Facile erit, explicatis conſiliis, accommodare rebus verba.* Liv. l. 8. n. 4.

ARTICLE II.

Choice of the generals and officers. Raiſing of troops.

SECT. I.

Choice of the generals and officers.

IT is a great advantage for kings to be abſolute maſters in the choice of the generals and officers of their armies; and the higheſt praiſe, which can be given them, is to ſay, that known reputation and ſolid merit are the ſole motives that determine them in it. And indeed can they have too much attention in making a choice, which in ſome meaſure equals a private perſon with his ſovereign, by inveſting him with the whole power, glory, and fortune of his dominions? It is principally by this characteriſtic princes capable of governing are known; and it is to the ſame they have been always indebted for the ſucceſs of their arms. We do not find, that the great Cyrus, Philip, or his ſon Alexander, ever confided their troops to generals without merit and experience. The caſe was not the ſame under the ſucceſſors of Cyrus and Alexander, with whom intrigue, cabal, and the credit of a favourite uſually preſided in this choice, and almoſt always excluded the beſt ſubjects. Hence the ſucceſs of their wars was anſwerable to ſuch a manner of commencing them. I have no occaſion to cite examples to prove this: hiſtory abounds with them.

Her. l. 5. c. 75. I proceed to republics. At Sparta the two kings, in virtue of their rank only, had the right and poſſeſſion of the command, and in the earlier times marched together at the head of the army: but a diviſion,

diviſion, that happened between Cleomenes and Demaratus, occaſioned the making of a law, which ordained, that only one of the kings ſhould command the troops; and this was afterwards obſerved, except in extraordinary caſes. The Lacedæmonians were not ignorant, that authority is weak when divided; that two generals ſeldom agree long; that great enterpriſes can hardly ſucceed, unleſs under the conduct of a ſingle man; and that nothing is more fatal to an army, than a divided command.

This inconvenience muſt have been much greater at Athens, where, by the conſtitution of the ſtate itſelf, ten perſons were always to command; becauſe, Athens being compoſed of ten tribes, each furniſhed their own chief, who commanded their day ſucceſſively. Beſides which, they were choſen by the people, and that every year. This occaſioned a ſmart ſaying of Philip's, that he admired the good fortune of the Athenians, who could find in a ſet time, every year, ten captains; whereas, during his whole reign, it had ſcarce been in his power to find * one.

The Athenians, however, eſpecially at critical conjunctures, muſt have been attentive in appointing citizens of real merit for their generals. From Miltiades to Demetrius Phaleræus, that is to ſay, during almoſt two hundred years, a conſiderable number of great men were placed by Athens at the head of her armies, who raiſed their country's glory to the moſt exalted height. In thoſe times all jealouſy was baniſhed, and the public good the the ſole motive of power. There is a fine example of this in the war of Darius againſt the Greeks. The danger was exceeding great. The Athenians were alone againſt an innumerable army. Of the Herod. c. 10 110.

* *This was Parmenio.*

ten generals, five were for fighting, and five for retreating. Miltiades, who was at the head of the former, having gained the Polemarch on his ſide, (which officer had a deciſive voice in the council of war in caſe of diviſion) it was reſolved to fight. All the generals, acknowledging the ſuperiority of Miltiades to themſelves, when the day came, reſigned the command to him. It was at this time the celebrated battle of Marathon was fought.

It ſometimes happened that the people, ſuffering themſelves to be ſwayed by their orators, and following their caprice in every thing, conferred the command upon perſons unworthy of it. We may remember the abſolute credit of the famous Cleon with the multitude, who was appointed to command in the firſt years of the Peloponneſian war, though a turbulent, hot-headed, violent man, without ability or merit. But theſe examples were rare, and not frequently repeated at Athens till the later times, when they proved one of the principal cauſes of its ruin.

Diog. Laert. in Antiſth. p. 369.

The philoſopher Antiſthenes made the Athenians ſenſible, one day, in a pleaſant and facetious manner, of the abuſes committed amongſt them in the promotions to the public offices. He propoſed to them, with a ſerious air, in a full aſſembly, that it ſhould be ordained by a decree, that for the future the aſſes ſhould be employed in tillage as well as the horſes and oxen. When he was anſwered, that the aſſes were not intended by nature for that labour: *You are deceived*, ſaid he, *that ſignifies nothing: Don't you ſee that our citizens, though ever ſo much aſſes and ſots before, become immediately able generals, ſolely from your election of them.*

At Rome, the people alſo elected the generals, that is to ſay, the conſuls. They held their office only one year. They were ſometimes continued in the command under the names of proconſuls or

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proprætors. This * annual change of the generals was a great obſtacle to the advancement of affairs, the ſucceſs of which required an uninterrupted continuation. And this is the advantage of monarchical ſtates, in which the princes are abſolutely free, and diſpoſe all things at diſcretion, without being ſubject to any neceſſity. Whereas, amongſt the Romans, a conſul ſometimes arrived too late, or was recalled before the time for holding the aſſemblies. Whatever diligence he might uſe in his journey, before the command could be transferred to a ſucceſſor, and he was ſufficiently informed of the condition of the army, a knowledge indiſpenſably previous to all undertakings, a conſiderable ſpace of time muſt have elapſed, which made him loſe the occaſion of acting, and of attacking the enemy to advantage. Beſides which, he often found affairs, upon his arrival, in a bad condition, through his predeceſſor's ill conduct, and an army compoſed in part of new-raiſed and unexperienced troops, or corrupted by licence or want of diſcipline. Fabius † intimated part of theſe reflections to the Roman people, when he exhorted them to chuſe a conſul capable of oppoſing Hannibal.

* Interrumpi tenorem rerum, in quibus peragendis continuatio ipſa efficaciſſima eſſet, minimè convenire. Inter traditionem imperii, novitatemque ſucceſſoris, quæ noſcendis prius quam agendis rebus imbuenda ſit, ſæpe bene gerendæ rei occaſiones intercidere. *Liv.* l. 41. n. 15.

Poſt tempus (conſules) ad bella ierunt: ante tempus comitiorum cauſa revocati ſunt: in ipſo conatu rerum circumegit ſe annus—— Male geſtis rebus alterius ſucceſſum eſt: tironem aut mala diſciplina inſtitutum exercitum acceperunt. At herculè Reges, non liberi ſolum impedimentis omnibus, ſed domini rerum temporumque, trahunt conſiliis cuncta, non ſequuntur. *Liv.* l. 9. n. 18.

† Cum, qui eſt ſummus in civitate dux, cum legerimus, tamen repentè lectus, in annum creatus adverſus veterem ac perpetuum imperatorem comparabitur, nullis neque temporis neque juris incluſum anguſtiis, quo minus ita omnia gerat adminiſtretque ut tempora poſtulabunt belli: nobis autem in apparatu ipſo, ac tantum inchoantibus res, annus circumagitur. *Liv.* l. 24. n. 8.

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The ſhort term of one year, and the uncertainty of the command's being further prolonged, did indeed induce the generals to make the beſt uſe of their time: but it was often a reaſon for their putting a ſpeedier end to their enterpriſes, than they would otherwiſe have done, and upon leſs advantageous conditions, from the apprehenſion that a ſucceſſor might reap the fruit of their labours, and deprive them of the honour of having terminated the war glorioufly. A true zeal for the public good, and a perfectly diſintereſted greatneſs of ſoul, would have diſdained ſuch conſiderations. I am afraid there are very few examples of this kind. The great * Scipio himſelf, I mean the firſt, is reproached with this weakneſs, and with not having been inſenſible to this fear. A virtue of ſo pure and exalted a nature, as to neglect ſo ſenſible and ſo affecting an intereſt, ſeems above humanity: at leaſt it is very uncommon.

The authority of the conſuls confined, in point of time, within ſuch narrow bounds, was, it muſt be confeſſed, a great inconvenience. But the danger of infringing the public liberty, by continuing the ſame man longer in the command of all the forces of the ſtate, obliged them to overlook this inconvenience, from the apprehenſion of incurring a much greater.

The neceſſity of affairs, the diſtance of places, and other reaſons, at length reduced the Romans to continue their generals in the command of their armies for many years. But the inconvenience really enſued from it, which they had apprehended; for the generals, by that duration of their power, became their country's tyrants. Amongſt other examples I might cite Sylla, Marius, Pompey, and Cæſar.

* Ipſum Scipionem expectatio ſucceſſoris, ventum ad paratam alterius labore ac periculo finiti belli famam, ſollicitabat. *Liv.* l. 30. n. 36.

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The choice of the generals usually turned upon their personal merit; and the citizens of Rome had at the same time a great advantage, and a powerful motive for acting in that manner. What facilitated this choice was the perfect knowledge they had of those who aspired at command, with whom they had served many campaigns, whom they had seen in action, and whose genius, talents, successes, and capacity for the highest employments, they had time to examine and compare by themselves, and with their comrades. This * knowledge, which the Roman citizens had of those who demanded the consulship, generally determined their suffrages in favour of the officers, whose ability, valour, generosity, and humanity, they had experienced in former campaigns: "He took care of me, said they "when I was wounded; he gave me part of the "spoils; under his conduct we made ourselves "masters of the enemy's camp, and gained such "a victory; he always shared in the pains and fa"tigue with the soldier; it is hard to say, whether "he is most fortunate or most valiant." Of what weight was such discourse!

The motive, which induced the Roman citizens to weigh and examine carefully the merit of the competitors, was the personal interest of the electors, the major part of whom, being to serve under them, were very attentive not to confide their lives, honour, and the safety of their country, to generals they did not esteem, and from whom they did not expect good success. It was the soldiers

* Num tibi hæc parva adjumenta & subsidia consulatus? voluntas militum? quæ cum per se valet multitudine, tum apud suos gratia: tum verò in consule declarando multum etiam apud populum Romanum auctoritatis habet suffragatio militaris——Gravis est illa oratio: Me saucium recreavit; me præda donavit; hoc duce castra cepimus, signa contulimus; nunquam iste plus militi laboris imposuit, quam sibi sumpsit; ipse cum fortis, tum etiam fælix. Hoc quanti putas esse ad famam hominum ac voluntatem? *Cic. pro Muræn.* n. 38.

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themſelves, who in the *comitia* made choice of theſe generals. We ſee they knew them well, and find by experience, that they were ſeldom miſtaken. We obſerve even in our times, that when they go upon parties to plunder *(marauding)* they always chuſe, without partiality or favour, thoſe amongſt them that are moſt capable of commanding them. It was in this ſpirit Marius was choſen, againſt the will of his general Metellus; and Scipio Æmilianus preferred, through a like prejudice of the ſoldiers in his favour.

It muſt be owned, however, that the nomination of commanders was not always directed by public and ſuperior views; and that cabal, and addreſs to inſinuate into the people's opinion, to flatter, and ſooth their paſſions, had ſometimes a great ſhare in it. This was ſeen at Rome, in regard to Terentius Varro; and at Athens, in the inſtance of Cleon. The multitude is always the multitude, that is to ſay, fickle, inconſtant, capricious, and violent: but the people of Rome were leſs ſo than any. They gave, upon many occaſions, examples of a moderation and wiſdom, not to be ſufficiently admired; ſubmitting themſelves, in the moſt laudable manner, to the opinion of the ſenate; forgetting nobly their prejudices, and even reſentment, in favour of the public good, and voluntarily renouncing the choice they had made of perſons incapable of ſuſtaining the weight of affairs, as it happened, when the conſulſhip was continued to Fabius, after the remonſtrance himſelf had made upon the incapacity of thoſe who had been elected: an odious proceeding in every other conjuncture, * but which, at

Liv. l. 10. n. 22. & 34.
Id. l. 26. n. 22.

* Tempus, ac neceſſitas belli ac diſcrimen ſummæ rerum faciebant ne quis aut in exemplum exquireret, aut ſuſpectum cupiditatis imperii conſulem haberet. Quin laudabant potius magnitudinem animi, quod, cum ſummo imperatore eſſe opus reip. ſciret, ſeque eum haud dubiè eſſe; minoris invidiam, ſi qua ex re oriretur, quam utilitatem reip. feciſſet. *Liv.* l. 24. n. 9.

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that time, did Fabius great honour, becauſe the effect of his zeal for the republic, to the ſafety of which he was not afraid, in ſome meaſure, to ſacrifice his own reputation.

The armies of the Roman people conſiſted generally of four legions, of which each conſul commanded two. They were called the firſt, ſecond, third, and ſo on, according to the order in which they had been raiſed. Beſides the two legions commanded by each conſul, there was the ſame number of infantry, ſupplied by the allies. After all the people of Italy were aſſociated into the freedom of the city, that diſpoſition underwent many alterations. The four legions under the conſuls were not the whole force of Rome. There were other bodies of troops, commanded by prætors, proconſuls, &c.

When the conſuls were in the field together, their authority being equal, they commanded alternately, and had each their day, as it happened at the battle of Cannæ. One of them often, knowing his collegue's ſuperior ability, voluntarily reſigned his rights to him. Agrippa Furius * acted in this manner, in regard to the famous T. Quintius Capitolinus, who, in gratitude to his collegue's generoſity and noble behaviour, communicated all his deſigns to him, ſhared with him the honour of all the ſucceſſes, and made him his equal in every thing. On another occaſion †, the military tri-

* In exercitu Romano cum duo conſules eſſent poteſtate pari; quod ſaluberrimum in adminiſtratione magnarum rerum eſt, ſumma imperii, concedente Agrippa, penes collegam erit: & prælatus ille facilitati ſummittentis ſe comiter reſpondebat, communicando conſilia laudeſque, & æquando imparem ſibi. *Liv.* l. 3. n. 70.

† Collegæ fateri regimen omnium rerum, ubi quid bellici terroris ingruat, in viro uno eſſe: ſibique deſtinatum in animo eſſe Camillo ſummittere imperium; nec quicquam de majeſtate ſua detractum credere, quod majeſtati ejus viri conceſſiſſet——Erecti gaudio fremunt, nec dictatore unquam opus fore reip. ſi tales viros in magiſtratu habeat, tam concordibus junctos animos, parere atque imperare juxtà paratos, laudemque conferentes potius in medium, quam ex communi ad ſe trahentes. *Liv.* l. 6. n. 6.

bunes,

bunes, who had been ſubſtituted to the conſuls, and were at that time ſix in number, declared, that, in the preſent critical conjuncture, only one of them was worthy of the command, this was the great Camillus; and that they were reſolved to repoſe their whole authority in his hands; convinced, that the juſtice they rendered his merit could not but reflect the greateſt glory upon themſelves. So generous a conduct was attended with univerſal applauſe. Every body cried out, that they ſhould never have occaſion to have recourſe to the unlimited power of dictators, if the republic always had ſuch magiſtrates, ſo perfectly united amongſt themſelves, ſo equally ready either to obey or command; and who, ſo far from deſiring to engroſs all glory to themſelves, were contented to ſhare it in common with each other.

It was a great advantage to an army to have ſuch a general, as Livy deſcribes in the perſon of Cato, who was capable of deſcending to the leaſt particular *; who was alike attentive to little and great things; who foreſaw at a diſtance, and prepared every thing neceſſary to an army; who did not content himſelf with giving orders, but took care to ſee them executed in perſon; who was the firſt in ſetting the whole army the example of an exact and ſevere diſcipline; who diſputed ſobriety, watching, and fatigue, with the meaneſt ſoldier; and, in a word, who was diſtinguiſhed by nothing in the army, but the command, and the honours annexed to it.

After the nomination of conſuls and prætors, the tribunes were elected to the number of twenty-four,

* In conſule ea vis animi atque ingenii fuit, ut omnia maxima minimaque per ſe adiret, atque ageret; nec cogitaret modò imperaretque quæ opus eſſent, ſed pleraque per ſe ipſe tranſigeret; nec in quemquam omnium graviùs ſeveriùſque, quam in ſemetipſum imperium exerceret; parſimonia, & vigiliis, & labore cum ultimis militum certaret; nec quicquam in exercitu ſuo præcipui præter honorem atque imperium haberet. *Liv.* l. 34. n. 18.

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fix to each legion. Their duty was to see that the army observed discipline, obeyed orders, and did their duty. During the campaign, which was fix months, they commanded successively, two and two together, in the legion for two * months: they drew lots for the order in which they were to command. Polyb. l. 6. p. 466.

At first, the consuls nominated these tribunes; and it was of great advantage to the service, that the generals themselves had the choice of their officers. In process of time, † of the four and twenty tribunes, the people elected six; about the 393d year of Rome, and ‡ fifty years after, that is to say, in the 444th year of Rome, they chose to the number of sixteen. But, in important wars, they had sometimes ‖ the moderation and wisdom to renounce that right, and to abandon the choice entirely to the prudence of the consuls and prætors, as happened in the war against Perseus king of Macedonia; of the effects of which Rome was in very great apprehension.

Of these twenty-four tribunes, fourteen must have served at least five years, and the rest ten: a conduct of great wisdom, and very proper to inspire the troops with valour, from the esteem and confidence it gave them for their officers. Care was also taken to distribute these tribunes in such a manner, that in each legion the most experienced

* Secundæ Legionis Fulvius Tribunus militum erat. *Is mensibus suis* dimisit legionem. *Liv.* l. 40. n. 41.

† Cum placuisset eo anno tribunos militum ad legioges suffragio fieri (nam & antea, sicut nunc quos Rufulos vocant, imperatores ipsi faciebant) secundum in sex locis Manlius tenuit. *Liv.* l. 7.

‡ Duo imperia eo anno dari cœpta per populum, utraque ad rem militarem pertinentia. Unum, ut tribuni senideni in quatuor legiones a populo crearentur, quæ antea perquam paucis suffragio populi relicti locis, dictatorum & consulum fuerunt beneficia. *Liv.* l. 9. n. 30.

‖ Decretum ne tribuni militum eo anno suffragiis crearentur, sed consulum prætorumque in iis faciendis judicium arbitriumque esset. *Liv.* l. 42. n. 31.

were

were united with thoſe who were younger, in order to inſtruct and form them for commanding.

The Præfects of the allies, *præfecti ſociûm*, were in the allied troops what the tribunes were in the legions. They were choſen out of the Romans, as we may infer from theſe words of Livy, *Præfectos ſociûm, civeſque Romanos alios.* Which is confirmed by the names of thoſe we find appointed in the ſame author, *Lib.* 27. *n.* 26, *and* 41. *Lib.* 33. *n.* 36, &c. This practice, which left the Romans the honour, of commanding in chief amongſt the allies, and gave the latter only the quality of chief ſubaltern officers, was the effect of a wiſe policy, to hold the allies in dependance, and might contribute very much to the ſucceſs of enterpriſes, in making the ſame ſpirit and conduct actuate the whole army.

Lib. 23. n. 7.

I have not ſpoken of the officers called *Legati*, lieutenants. They commanded in chief under the conſul, and received his orders, as the lieutenant-generals ſerve under a marſhal of France, or under the eldeſt lieutenant-general, who commands the army in chief. It appears that the conſuls choſe theſe lieutenants. Mention is made of this in the earlieſt times of the republic. In the battle of the Lake of Regillus, that is to ſay, in the 255th year of Rome, T. Herminius the lieutenant diſtinguiſhed himſelf in a particular manner. Fabius Maximus, ſo well known from his wiſe conduct againſt Hannibal, did not diſdain to be his ſon's lieutenant, who had been elected conſul. The latter, in that quality, was preceded by twelve lictors, who walked one after the other; part of their function was to cauſe due honour to be paid to the conſul. Fabius the father, upon his ſon's going to meet him, having paſſed the firſt eleven lictors, continuing on horſeback, the conſul ordered the twelfth to do his duty. That lictor immediately

Liv. l. 21. n. 20.

Id. l. 24. n. 44.

called

called out to Fabius with a loud voice to dismount. The venerable old man obeyed directly, and addressing himself to his son told him: *I had a mind to see, whether you knew that you were consul.* It is well known that Scipio Africanus offered to serve as lieutenant under the consul his brother, and thereby determined the senate to give the latter Greece for his province. Liv. l. 37. n. 1.

The reader has no doubt observed, in all that I have hitherto said concerning the Romans, a spirit of understanding and conduct which evidently shews, that the great success of their arms was not the effect of chance, but of the wisdom and ability, which presided over every part of their government.

SECT. II.

Raising of troops.

THE Lacedæmonians, properly speaking, were a people of soldiers. They cultivated neither arts nor sciences. They applied themselves to neither commerce nor agriculture; leaving the care of their lands entirely to slaves, who were called *Helots*. All their laws, institutions, education, in a word, the whole scheme of their government, tended to making them warriors. This had been the sole view of their legislator, and it may be said, that he succeeded perfectly well in it. Never were there better soldiers, more formed for the fatigues of war, more inured to military exercises, more accustomed to obedience and discipline, more full of courage and intrepidity, more sensible to honour, nor more devoted to glory, and the good of their country.

They were distinguished into two sorts: the one, who were properly called *Spartans*, inhabited the

city of Sparta; the others, who were named only *Lacedæmonians*, resided in the country. The former were the flower of the state, and filled all offices. They were almost all of them capable of commanding in chief. The wonderful change, occasioned only by one of them (Xanthippus) in the army of the Carthaginians, to whose aid he was sent, has been related; and also in what manner Gylippus, another Spartan, saved Syracuse. Such were the *three hundred*, who, with Leonidas at their head, repulsed, a great while, the innumerable army of the Persians, at the streights of Thermopylæ.

Herod. l. 7. c. 34. The number of the Spartans, at that time, amounted to eight thousand men, or something more.

The age for carrying arms was from thirty to sixty. The elder and younger were left at home to guard the city. They never armed their slaves but upon extreme necessity. At the battle of Platæa, the troops furnished by Sparta amounted to ten thousand men, that is to say, five thousand Lacedæmonians, and as many Spartans. Each of the latter had seven Helots to attend him, the number of which, in consequence, amounted to thirty-five thousand. These were equipped as light-armed troops. The Lacedæmonians had very little cavalry, and naval affairs were then entirely unknown to them. It was not till very late, and contrary to the plan of Lycurgus, that they commenced a maritime power, nor were their fleets at any time very numerous.

Athens was much larger and better peopled than Sparta. In the time of Demetrius Phaleræus it was computed to have twenty thousand citizens, ten thousand strangers settled in the city, and forty thousand slaves.

All the young Athenians were inrolled in a public register at the age of eighteen, and at the same time took a solemn oath, by which they engaged

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to ſerve the republic, and to defend it to the utmoſt of their power upon all occaſions. They were bound by this oath to the age of ſixty. Each of the ten tribes, that formed the body of the ſtate, furniſhed a certain number of troops, according to the occaſion, either for the ſea or land ſervice: for the naval power of Athens became very conſiderable in proceſs of time. In Thucydides we ſee that the troops of the Athenians, in the beginning of the Peloponneſian war, were thirteen thouſand heavy-armed foot, ſixteen hundred archers, and very near as many horſe, which in all might amount to ſixteen thouſand men; without including ſixteen thouſand more, who remained to guard the city, citadel, and ports, either citizens under or over the military age, or ſtrangers ſettled among them. The fleet at that time conſiſted of three hundred galleys. I ſhall relate in the following article the order obſerved in them.

The troops both of Sparta and Athens were not numerous, but full of valour, well-diſciplined, intrepid, and, one might alſo ſay, invincible. They were not ſoldiers raiſed by chance, often without ſpirit or home, inſenſible to glory, indifferent to a ſucceſs little affecting them; who had nothing to loſe, who made war a mercenary traffic, and ſold their lives for a ſcanty means of ſubſiſting, their pay. They were the choſen troops of the two moſt warlike ſtates in the world; ſoldiers determined to conquer or die; who breathed nothing but war and battle; who had nothing in view but glory and the liberty of their country; who in action believed they ſaw their wives and children, whoſe ſafety depended on their arms and valour. Such were the troops raiſed in Greece, amongſt whom deſertion, and the puniſhment of deſerters, was never ſo much as mentioned; for could a ſoldier be tempted to renounce his family and country for ever?

As much may be ſaid of the Romans; of whom it remains for us to ſpeak. Amongſt them, the conſuls generally levied the troops: and, as new ones were nominated every year, ſo new levies were alſo made annually.

The age for entering into the army was ſeventeen years. * Only citizens were admitted to ſerve in it; and none were received under that age, but in extraordinary caſes and on preſſing occaſions. Once they were obliged to arm ſlaves: but firſt, which is very remarkable, they were ſeverally aſked, whether they entered themſelves freely and of their own accord; becauſe they did not think it proper to place any confidence in ſoldiers liſted by fraud or force. Sometimes they went ſo far as to arm thoſe who were confined in the priſons either for debt or crimes: but this was very ſeldom practiſed.

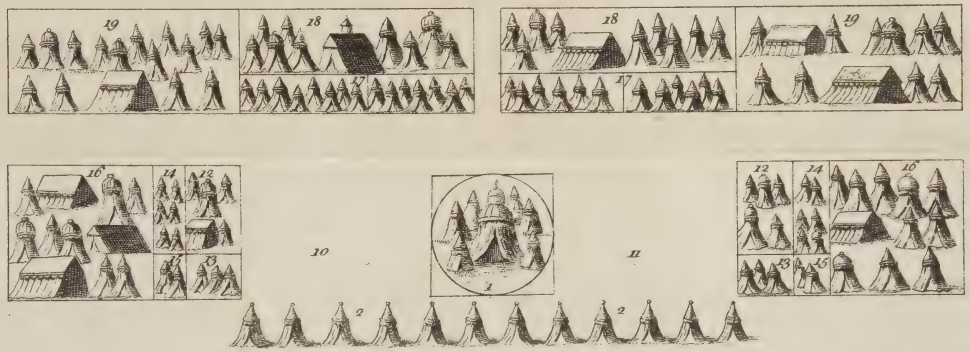
The Roman troops therefore were compoſed only of citizens. Thoſe among them who were poor (*proletarii*, *capite cenſi*) were not liſted. They were for having ſoldiers, whoſe fortunes might be anſwerable to the republic for their zeal in its defence. Moſt of theſe ſoldiers lived in the country, to take care of their eſtates themſelves, and to improve them with their own hands. Thoſe who dwelt at Rome had each of them their portion of land, which they cultivated in the ſame manner. So that the † whole youth of Rome were accuſtomed to

* Delectu edicto, juniores annis ſeptemdecem, & quoſdam prætextatos ſcribunt—Aliam formam novi delectus inopia liberorum capitum ac neceſſitas dedit. Octo millia juvenum validorum ex ſervitiis, priùs ſciſcitantes ſingulos vellentne militare, empta publicè armaverunt. *Liv.* l. 32. n. 57.

† Sed ruſticorum maſcula militum
Proles, Sabellis docta ligonibus
Verſare glebas, & ſeveræ
Matris ad arbitrium reciſos
Portare fuſtes. *Horat. Od. 6. lib. 3.*

But

Roman Camp.



to * support the rudeſt fatigues; to endure ſun, rain, and hail; to lie hard, and often in the midſt of the fields, and in the open air; to live ſoberly and wiſely, and to be contented with a little. They never knew pleaſures or luxury, had their members inured to all ſorts of labour, and, by their reſidence in the country, had contracted the habit of handling heavy inſtruments, digging of trenches, and carrying heavy burthens. Equally ſoldiers and labourers, theſe Romans in entering the ſervice only changed their arms and tools. The young people, who lived in the city, were not much more tenderly bred than the others. Their continual exerciſes in the field of Mars, their races on horſebaek and on foot, always followed by the cuſtom of ſwimming the Tiber to waſh off their ſweat, was an excellent apprenticeſhip for the trade of war. Such ſoldiers muſt have been very intrepid. For the leſs men are acquainted with pleaſures, the leſs they fear death.

Before they proceeded to levy troops, the conſuls gave the people notice of the day, upon which all the Romans, capable of bearing arms, were to aſſemble. The day being come, and the people aſſembled in the capitol, or the field of Mars, the military tribunes drew the tribes by lot, and called them out as they came up. They afterwards made their

But ſoldiers of a ruſtic mould;
Rough, hardy, ſeaſon'd, manly, bold;
Either they dug the ſtubborn ground,
Or thro' hewn woods their weighty ſtrokes did ſound.
Roſcommon.

* Nunquam puto potuiſſe dubitari aptiorem armis ruſticam plebem quæ ſub dio & in labore nutritur; ſolis patiens; umbræ negligens; balneārum neſcia; deliciarum ignara; ſimplicis animi; parvo contenta; duratis ad omnem laborum tolerantiam membris; cui geſtare ferrum, foſſam ducere, onus ferre, conſuetudo de rure eſt——Idem bellator, idem agricola, genera tantum mutabat armorum——Sudorem curſu & campeſtri exercitio collectum nando juventus abluebat in Tyberi. Neſcio enim quomodo minùs mortem timet, qui minùs deliciarum novit in vita. *Veget. de re mil.* l. 1. c. 3.

choice of these citizens, taking them each in his rank, four by four, as near as possible, of equal stature, age, and strength; and continued to do the same, till the four legions were complete.

After the troops were levied, every soldier took an oath to the consul or tribunes. By this oath they engaged *to assemble at the consul's order, and not to quit the service without his permission: to obey the orders of the officers, and to do their utmost to execute them; not to retire either through fear, or to fly from the enemy; and not to quit their rank.*

This was not a mere formality, nor a ceremony purely external, of no effect with regard to the conduct. It was a very serious act of religion, sometimes attended with terrible imprecations, which made a strong impression upon the mind, was judged absolutely and indispensably necessary, and without which the soldiers could not fight against the enemy. The Greeks as well as the Romans made their troops take this oath, or one to the same effect; and they founded their reason for it upon a great principle. They knew, that a private person of himself has no right over the lives of other men: that the prince or state, who have received that power from God, put arms into his hands: that it is only in virtue of this power, with which he is invested by his oath, that he can draw his sword against the enemy: and that, without this power, he makes himself guilty of all the blood he sheds, and commits homicide as often as he kills an enemy.

The * consul, who commanded in Macedonia against Perseus, having dismissed a legion in which the son of Cato the censor served, that young officer, who had nothing in view but to distinguish himself by some action, did not withdraw with the legion,

* *Manucius believes this to have been Paulus Æmilius.*

but

but remained in the camp. His father thereupon wrote immediately to the conſul, to deſire, if he thought fit to ſuffer his ſon to continue in the army, that he would make him take a new oath, becauſe * being diſcharged from the former, he had no longer any right to join in battle againſt the enemy. And he wrote to his ſon to the ſame effect, adviſing him not to fight till he had ſworn again. Cic. l. 1. de Offic. n. 36, 37.

It was in conſequence of the ſame maxim, that Cyrus the great exceedingly applauded the action of an officer, who, having raiſed his arm to ſtrike an enemy, upon hearing the retreat ſounded, ſtopped ſhort, regarding that ſignal as an order to proceed no farther. What might not be expected from officers and ſoldiers ſo accuſtomed to obedience, and ſo full of reſpect for their general's orders, and the rules of diſcipline? Xenoph. in Cyrop.

The tribunes of the ſoldiers at Rome, after the oath, told the legions the day and place for the general rendezvous. When they were aſſembled at the time fixed, the youngeſt and pooreſt were made light-armed troops; the next in age *Haſtati*; the ſtrongeſt and moſt vigorous *Principes*; and the oldeſt ſoldiers *Triarii*.

Two legions were uſually given to each conſul. The number of ſoldiers to a legion was not always the ſame. At firſt they were not above three thouſand, but were afterwards augmented to four, five, ſix thouſand, and ſomething more. The moſt uſual number was four thouſand two hundred foot, and three hundred horſe. Such it was in the time of Polybius, where I ſhall fix it.

The Legion was divided into three bodies, the *Haſtati*, the *Principes*, and the *Triarii*. The reader will be ſo good to excuſe me the uſe of theſe three words, having no others to expreſs their meaning.

* Quia, priore amiſſo jure, cum hoſtibus pugnare non poterat. *Cic.*

The two firſt bodies conſiſted each of twelve hundred men, and the third of ſix hundred only.

The Haſtati formed the firſt line; the Principes the ſecond; and the Triarii the third. This laſt body was compoſed of the oldeſt and moſt experienced ſoldiers, and at the ſame time the braveſt in the army. The danger muſt have been very great and urgent before it reached this third line. From whence came the proverbial expreſſion, *Res ad Triarios rediit.*

Each of theſe three bodies were divided into ten parts or *Maniples*, conſiſting of ſixſcore in the Haſtati and Principes, and only of ſixty in the Triarii.

Each Maniple had two centuries or companies. Antiently and at its firſt inſtitution by Romulus, the century had an hundred men from which it took its name. But afterwards it conſiſted only of ſixty in the Haſtati and Principes, and thirty Triarii. The commanders of theſe centuries or companies were called *Centurions*. I ſhall ſoon explain the diſtinction of their ranks.

Beſides theſe three bodies, there were in each legion light-armed troops of different denominations, *Rorarii*, *Accenſi*; and in later times the *Velites*. They were alſo twelve hundred in number. They were not properly a diſtinct body, but diſpoſed into the three others, according to occaſion. Their arms were a ſword, a javelin, (*haſta*) a *parma*, that is a light ſhield. The youngeſt and moſt active ſoldiers were choſen for this body.

From the time of Julius Cæſar no mention is made of the diſtinct ranks of the Haſtati, Principes, and Triarii, though the army was almoſt always drawn up in three lines. The legion at that time was divided into ten parts, which were called *Cohortes*. Each cohort was a kind of legion abridged. It had ſix-ſcore Haſtati, ſix-ſcore Principes,

cipes, ſixty Triarii, and ſix-ſcore light-armed men, which made in all four hundred and twenty. That is preciſely the tenth part of a legion, conſiſting of four thouſand two hundred foot.

The Roman cavalry was not very numerous: three hundred horſe to above four thouſand foot. It was divided alſo into ten companies, *(Alas)* each conſiſting of thirty men.

The horſe were choſen out of the richeſt of the citizens; and in the diſtribution of the Roman people by centuries, of which Servius Tullius was the author, they compoſed the eighteen firſt centuries. They are the ſame who are afterwards mentioned in hiſtory under the name of Roman knights, and formed a third and middle order between the ſenate and people. The republic ſupplied them with horſes and ſubſiſtence. Liv. l. 1. n. 43.

Till the ſiege of Veii, there were no other cavalry in the Roman armies. At that time thoſe who were qualified by their eſtates, to be admitted into the horſe, but had not an horſe allowed them at the public expence, nor in conſequence the rank of knights, offered to ſerve in the cavalry, ſupplying themſelves with horſes. Their offer was accepted. Liv. l. 5. n. 7.

From thenceforth there were two * ſorts of cavalry in the Roman armies: the one, whom the public ſupplied with horſes, *equum publicum*; and theſe were the true Roman knights; the others, who furniſhed themſelves, and ſerved *equo ſuo*, had not the title or prerogatives of the knights.

But the horſe kept at the public expence was always the conſtitutive title of the Roman knight: and, when the cenſors degraded a Roman knight, it was by taking his horſe from him.

* *This diſtinction is ſtrongly enough marked in Mago's diſcourſe to the ſenate of Carthage upon the gold rings:* Neminem niſi equitem, & eorum ipſorum primores, id inſigne gerere. *Liv.* l. 23, n. 12. *Theſe* primores equitum *are the true Roman knights,* qui merebant equo publico.

Beſides

Beſides the citizens, who formed the legions, there were troops of the allies in the Roman army: theſe were ſtates of Italy, which the Romans had ſubjected, and had left the uſe of their laws and government, upon condition of ſupplying them with a certain number of troops. They furniſhed an equal number of infantry with the Romans, and generally twice as many horſe. Amongſt the allies, the beſt-made and braveſt both of the horſe and foot were choſen to be poſted about the conſul's perſon: theſe were called *Extraordinarii*. The third part of the horſe, and the fifth of the foot, were diſpoſed of in this manner; the reſt were placed, half on the right and half on the left wings, the Romans generally reſerving the centre to themſelves.

The Roman army, as we ſee from what has hitherto been ſaid, conſiſted ſolely of citizens and allies. It was not till * the ſixth year of the ſecond Punic war, that the Romans admitted mercenaries into their troops, which was ſeldom or ever done afterwards. Theſe were Celtiberians, who, as we find, compoſed the greateſt part of Cn. Scipio's army in Spain: An eſſential fault, which coſt him his life, and Rome almoſt the loſs of Spain, and perhaps the ruin of her empire. That example, as † Livy wiſely obſerves, ought to have taught Roman generals never to ſuffer a greater number of ſtrangers than of their own troops in their armies. It is well known, that the revolt of foreign troops more than once brought Carthage to the very brink of ruin. That republic had almoſt no other ſoldiers; which was the great defect of its militia.

* Id ad memoriam inſigne eſt, quod mercenarium militem in caſtris neminem ante, quam tum Celtiberos, Romani habuerunt. *Liv.* l. 24. n. 49.

† Id quidem cavendum ſemper Romanis ducibus erit, exemplaque hæc vere pro documentis habenda, ne ita externis credant auxiliis non plus ſui roboris ſuarumque propriè virium in caſtris habeant. *Liv.* l. 25. n. 33.

Such

Such a mixture of foreign and barbarous troops, and their ſuperiority in number, in the Roman armies, were one of the principal cauſes of the entire ruin of the Roman empire in the Weſt.

I return to the Centurions, whoſe different ranks I am to explain. I have ſaid that in each Maniple there were two centuries, and in conſequence two centurions. He who commanded the firſt century of the firſt Maniple of the Triarii, called alſo *Pilani*, was the moſt conſiderable of all the centurions, and had a place in the council of war with the conſul and principal officers: *Primipilus*, or *Primipili Centurio*. He was called *Primipilus prior*, to diſtinguiſh him from the centurion who commanded the ſecond century of the ſame Maniple, who was called *Primipilus poſterior*. And the the ſame was done in the other centuries. The centurion, who commanded the ſecond century of the ſame Maniple of the Triarii, was called *ſecundi pili Centurio*; and ſo on to the tenth, who was called *decimi pili Centurio*.

The ſame order was obſerved amongſt the Haſtati and Principes. The firſt centurion of the Principes was called *primus Princeps*, or *primi principis Centurio*; the ſecond *ſecundus Princeps*, and ſo on to the tenth. In this manner the Haſtati were called *primus Haſtatus*, *ſecundus Haſtatus*, &c.

The centurions were raiſed from an inferior to a ſuperior degree, not only by ſeniority, but merit.

This diſtinction of degrees and poſts of honour, which were only granted to bravery and real ſervice, excited an incredible emulation amongſt the troops, that kept them always in ſpirit and order. A private ſoldier became a centurion, and, afterwards riſing through all the different degrees, might at length arrive at the principal poſts. This view, this hope, ſupported them in the midſt of the moſt

ſervice,

ſevere fatigues, animated them, prevented them from committing faults, or taking diſtaſte to the ſervice, and prompted them to the moſt arduous and valiant actions. It is in this manner an invincible army is formed.

The officers were very warm in preſerving theſe diſtinctions and pre-eminences. I ſhall relate an inſtance of this very proper to the preſent ſubject, that is, the raiſing of troops; which does great honour to the Roman ſoldiery, and ſhews with what moderation and wiſdom their ſenſibility for glory was attended.

When the Roman people had reſolved upon the war againſt Perſeus, the laſt king of Macedonia, amongſt the other meaſures taken for the ſucceſs of it, the ſenate decreed, that the conſul, charged with that expedition, ſhould raiſe as many centurions and veteran ſoldiers, as he pleaſed, out of thoſe who did not exceed fifty years of age. Twenty-three centurions, who had been *Primipili*, refuſed to take arms, unleſs the ſame rank were granted them, which they had in the preceding campaigns. The affair was brought before the people. After Popilius, who had been conſul two years before, had pleaded the cauſe of the centurions, and the conſul his own, one of the centurions, who had appealed to the people, having obtained permiſſion to ſpeak, expreſſed himſelf to this effect:

Qui primos pilos duxerant.

"I am called Sp. Liguſtinus, of the Cruſtumine tribe, deſcended from the Sabines. My father left me a ſmall field and a cottage, where I was born, brought up, and now live. As ſoon as I was of age to marry, * he gave me his brother's daughter for my wife: She brought

* Pater mihi uxorem fratris ſui filiam dedit, quæ ſecum nihil attulit præter libertatem, pudicitiam, & cum his fœcunditatem, quanta vel in diti domo ſatis eſſet.

"me

" me no portion, but liberty, chaſtity, and a fruit-
" fulneſs ſufficient for the richeſt houſes. We have
" ſix ſons, and two daughters, both married. Of
" my ſons four have taken the robe of manhood,
" (*toga virilis*) the other two are ſtill infants. I
" began to bear arms in the conſulſhip of P. Sul-
" picius and C. Aurelius. I ſerved two years as a
" private ſoldier in the army, in Macedonia,
" againſt king Philip. The third year T. Quin-
" tius Flaminius, to reward me for my ſervices,
" made me * captain of a century in the firſt
" Maniple of the Haſtati. I ſerved afterwards as
" a voluntier in Spain, under Cato; and that ge-
" neral, who is ſo excellent a judge of merit, made
" me † firſt Maniple of the Haſtati. In the war
" againſt the Ætolians and king Antiochus, I roſe
" to the ſame rank among the Principes‖. I after-
" wards made ſeveral campaigns, and in a very
" few years have been § four times Primipilus; I
" have been four and thirty times rewarded by the
" generals, have received ſix Civic ** crowns, have
" ſerved two and twenty campaigns, and am above
" fifty years old. Though I had not compleated
" the number of years required by the law, and
" my age did not diſcharge me, ſubſtituting four
" of my children in my place, I ſhould deſerve to
" be exempt from the neceſſity of ſerving. But, by
" all I have ſaid, I only intend to ſhew the juſtice
" of my cauſe. For the reſt, as long as thoſe who
" levy the troops ſhall judge me capable of bear-
" ing arms, I ſhall not refuſe the ſervice. The
" tribunes ſhall rank me as they pleaſe, that is

* Decimum ordinem Haſtatum a gnavit.

† Dignum judicavit, cui primum Haſtatum prioris centuriæ aſſig-naret.

‖ Mihi primus Princeps prioris centuriæ eſt aſſignatus.

§ Quater primum pilum duxi.

** *The crowns given for having ſaved the life of a citizen were called ſo.*

their

" their buſineſs: mine is ſo to act, that none be " ranked above me for valour; as all the gene- " rals, under whom I have had the honour to ſerve, " and all my comrades can witneſs for me, I have " hitherto never failed to do. For you, centurions, " notwithſtanding your appeal, as even, during " your youth, you have never done any thing con- " trary to the authority of the magiſtrates and " ſenate, in my opinion, it would become your " age to ſhew yourſelves ſubmiſſive to the ſenate " and conſuls, and to think every ſtation * honour- " able, that gives you opportunity to ſerve the re- " public." When he had done ſpeaking, the conſul, after having given him the higheſt praiſes before the people, left the aſſembly, and carried the centurion with him into the ſenate. There he was publicly thanked in the name of that auguſt body, and the military tribunes, as a mark and reward of his valour and zeal, declared him Primipilus, that is, firſt officer of the firſt legion. The other centurions, renouncing their appeal, made no farther difficulty to enter into the ſervice.

Nothing gives us a juſter idea of the Roman character than facts of this kind. What a fund of good ſenſe, equity, nobleneſs, and even greatneſs of ſoul does this ſoldier expreſs! He ſpeaks of his antient poverty without ſhame, and of his glorious ſervices without vanity. He is not improperly tenacious of a falſe point of honour. He modeſtly defends his rights, and renounces them. He teaches all ages not to contend with their country, nor to make the public good give place to their private intereſt; and is ſo happy, as to bring over all thoſe in the ſame caſe, and aſſociated with himſelf, into his opinion. How powerful is ex-

* Et omnia honeſta loca ducere, quibus remp. defenſuri ſitis.

ample!

ample! The good diſpoſition of a ſingle perſon is ſometimes all that is neceſſary for reducing a multitude to reaſon.

ARTICLE III.

Preparations of war.

I Shall include in this article what relates to proviſions, the pay of ſoldiers, their arms, and ſome other cares neceſſary to be taken by generals before they begin to march.

SECT. I.

Of proviſions.

THE order obſerved by the Romans, in regard to proviſions, is better known to us than that of the Greeks: the quæſtor was charged with this care.

The quantity of corn for each ſoldier's daily ſubſiſtence was very near the ſame with both people; that is to ſay, a *chænix*, or the eighth part of a * Roman buſhel; ſix of which went to the Medimnus. The chænix was alſo the uſual daily allowance of a ſlave.

A Roman ſoldier therefore in the foot had four buſhels of wheat a month; which was called *menſtruum:* that is to ſay, thirty-two chænix's, which was ſomething more than a chænix *per* day. The foot ſoldier of the allies had as much.

The Roman Horſe ſoldier received two medimni of wheat, or twelve buſhels, a month, becauſe he had two domeſtics; which amounted to fourſcore

* *The Roman buſhel was about the ſize of the Engliſh, and contained three fourths and a little more of the French.*

and

and ſixteen chænix's, at the rate of ſomething more than a chænix *per* man daily. This horſeman had two horſes, one for himſelf, and the other to carry his baggage, &c. For theſe two horſes he received alſo, monthly, ſeven medimni of barley, which make two and forty buſhels, at the rate of one buſhel and a little more than three chænix's a day for two horſes.

It was neceſſary for one of theſe horſe troops to have a certain income, to ſupport the unavoidable expences he was at during the campaign. Hence it ſometimes happened that a citizen, though of a Patrician family, was obliged by his * poverty to ſerve in the foot.

The horſemen of the allies had a medimnus and one third *per* month; that is to ſay, eight buſhels of corn, becauſe he had only one horſe, and conſequently but one ſervant; and five medimni of barley for that horſe, which make thirty buſhels, at the rate of one buſhel a day.

The quantity of wheat for the officers augmented in proportion to their pay, of which we wall ſpeak in the ſequel.

The portion of corn was ſometimes doubled to the ſoldiers by way of honour and reward, as appears from ſeveral † paſſages in Livy.

The public ſtores of corn, of which the quæſtors, as I have ſaid, had the care, were carried either in ſhips, in waggons, or by beaſts of burthen: but the foot ſoldiers carried upon their ſhoulders the quantity of corn diſtributed to them for a certain time, which very much leſſened the number of carriages.

* Magiſtrum equitum dicit L. Tarquitium patriciæ gentis, ſed qui, cum ſtipendia pedibus propter paupertatem feciſſet, bello tamen primus longè Romanæ juventutis habitus eſſet. *Liv.* l. 3. n. 27.

† Milites, qui in præſidio fuerant duplici frumento in perpetuum; in præſentia ſingulis bobus donati. *Lib.* 7.

Hiſpanis duplicia cibaria dari juſſit. *Lib.* 24.

Four

Four bushels of wheat, which was the quantity of each soldier for a month, was * an heavy load, without reckoning all that he had carried besides. It is certain † that they were sometimes loaded with four bushels: but this undoubtedly was on extraordinary occasions, as upon a forced march, or a sudden expedition in the enemy's country. It is highly probable that they generally carried corn only for twelve, fifteen, or twenty days at most; and this weight diminished every day by the daily consumption.

It may be asked, why corn rather than bread was given to the troops. Perhaps this custom had been transferred from the city into the camp; for in the city the public distributions were made in corn, not in bread. Besides which, the weight of corn was lighter than that of bread. ‡ Pliny observes, that the weight of a bushel of wheat in grain augments exactly one third, when made into ammunition bread. This is a considerable difference. But again, it is conceived to have been a very great trouble for the soldiers to make their own bread, to grind the corn, and afterwards to bake it. Though they were divided into messes or chambers, called Contubernia, this seems to us a considerable difficulty. To judge rightly of it, we must imagine ourselves to live in the same times and countries with them, and consider the customs which then prevailed. The Roman soldier, employed in grinding the corn and baking the bread, did no more in the camp, than he had done every day in the city in times of peace.

* *The French bushel of wheat weighs from nineteen to twenty pounds.*

† Consul menstruum jusso milite secum ferre profectus, decimo post die, quam exercitum acceperat, castra movit. *Liv.* l. 44. n. 2. Aquileenses, nihil se ultra seire nec audere affirmare, quam triginta dierum frumentum militi datum. *Liv.* l. 44. n. 1.

‡ Lex certè naturæ, ut in quocumque genere pani militari tertia portio ad grani pondus accedit. *Plin.* l. 18. c. 7.

His meal ſupplied him with I know not what variety of diſhes. Beſides the common bread, he made a kind of ſoft boiled food of it, very agreeable to the troops: he mingled it with milk, roots, and herbs; and made pancakes of it upon a ſmall plate laid over the fire, or upon the hot aſhes, as was antiently the manner of regaling gueſts, and is ſtill practiſed throughout the Eaſt, where theſe kind of thin cakes are much preferred to our beſt bread.

Liv. l. 3. n. 27. Upon certain occaſions bread was diſtributed amongſt the troops. When L. Quintius Cincinnatus was created dictator againſt the Æqui, he ordered all the youth capable of bearing arms to repair to the Campus Martius before ſunſet, with bread for five days, each of them with twelve paliſades. He commanded ſuch of the citizens as were of a more advanced age to bake bread for the young ones, whilſt they were employed in preparing their arms, and providing themſelves with ſtakes. This was chiefly done when they were to * embark, becauſe there was not ſo much convenience on board the veſſels for making bread, as on ſhore.

But generally the ſoldier ground his corn himſelf, either in little mills, which he carried along with him, or upon ſtones; after which he baked his bread, not in ovens, but upon a fire, or under the aſhes.

To the corn given the troops were added ſalt, herbs, and roots, cheeſe, and ſometimes bacon and pork.

Plut. in Cat. p. 336. Their drink was anſwerable to this diet. The army very ſeldom uſed wine. Cato the elder drank nothing but water, except in great heats, when he

* Ut ſocii navales decem dierum cocta cibaria ad naves deferrent. *Liv.* l. 21. n. 49.

Cum triginta dierum coctis cibariis naves conſcenderunt. *Liv.* l. 23.

only

only mixed it with vinegar. The uſe of this drink was common in the armies: it was called *poſca*. Every ſoldier was obliged to have a bottle of it in his equipage. The emperor Peſcennius forbad the uſe of any other drink in his army: *Juſſit vinum in expeditione neminem bibere, ſed aceto univerſos eſſe contentos.* The expreſſion, *univerſos*, ſeems to imply that this prohibition was univerſal, and extended to the officers as well as ſoldiers. This drink (*poſca*) was very good to quench the thirſt immediately, and to correct the badneſs of the water which they might meet with upon their march. Hippocrates ſays, that vinegar is refreſhing: ὀξος ψυχρὸν: for which reaſon it was given to reapers, and thoſe who worked in the field. Ariſtotle tells us, that the Carthaginians, in time of war, abſtained from wine.

Spartian.

Ruth ii. 14.

Oeconom. l. 1. c. 5.

I have heard ſay, that nothing gives perſons in the army, who read the antient hiſtory, ſo much difficulty, as the article of proviſions; which difficulty is not without its foundation. We do not find, that either the Greeks or Romans had the precaution to provide magazines of forage, to lay up proviſions, to have a commiſſary general of ſtores, or to be followed by a great number of carriages. We are amazed at what is ſaid of the army of Xerxes king of Perſia, which amounted, including the train and baggage, to more than five millions of ſouls; and, for the ſubſiſtence of which, according to the computation of Herodotus, more than ſix hundred thouſand buſhels of wheat a day were requiſite. How was it poſſible to ſupply ſuch an army with ſo enormous a quantity of corn, and other neceſſaries in proportion?

Herod. l. 7. c. 187.

We muſt remember, that the ſame Herodotus had taken care to apprize us, that Xerxes had employed himſelf, during four years, in making pre-

Ibid. c. 20.

parations for this war. A conſiderable number of ſhips, laden with corn and other proviſions, always coaſted near the land-army, and were perpetally relieved by others, by the means of which it wanted nothing; the paſſage from the Helleſpont to the Grecian ſea and the iſland of Salamis being very ſhort, and this expedition not of a year's continuance. But no conſequence ſhould be drawn from it, being extraordinary, and one may ſay the only example of the kind.

In the wars of the Greeks againſt each other, their troops were little numerous, and accuſtomed to a ſober life; they did not remove far from their own country, and almoſt always returned regularly every winter. So that it is plain, it was not difficult for them to have proviſions in abundance, eſpecially the Athenians, who were maſters at ſea.

As much may be ſaid of the Romans, with whom the care of proviſions was infinitely leſs weighty, than it is at preſent with moſt of the nations of Europe. Their armies were much leſs numerous, and they had a much ſmaller number of cavalry. A legion of four thouſand foot made a body (after our manner) of ſix or ſeven battalions; and, having only three hundred horſe, they formed but two ſquadrons: ſo that a conſular army, of about ſixteen thouſand foot, including the Romans and their allies, was compoſed of very near twenty-five of our battalions, and had but eight or nine of our ſquadrons. In theſe days, to twenty-five battalions, we have often more than forty ſquadrons. What a vaſt difference muſt this make in the conſumption of forage and proviſions!

They did not want four or five thouſand horſes for the train of artillery, with bakers and ovens, and a great number of covered waggons, each of four horſes.

Beſides

Beſides this, the ſober manner of life in the army, confined to the mere neceſſaries of life, ſpared them an infinite multitude of ſervants, horſes, and baggage, which now exhauſt our magazines, ſtarve our armies, retard the execution of enterpriſes, and often render them impracticable. This was not the manner of living only of the ſoldiers, it was common to them with the officers and generals. Emperors themſelves, that is to ſay, the lords of the univerſe, Trajan, * Adrian, † Peſcennius, ‡ Alexander Severus, Probus, ‖ Julian, and many others, not only lived without luxury, but contented themſelves with boiled flour or beans, a piece of cheeſe or bacon, and made it their glory to level themſelves, in this reſpect, with the meaneſt of the ſoldiers. It is eaſy to conceive of what weight ſuch examples were, and how much they contributed to diminiſh the train of an army, to ſupport the taſte of frugality and ſimplicity amongſt the troops, and baniſh all luxury and idle ſhew from the camp.

It is not without reaſon, that all the authors I have cited at bottom obſerve, that thoſe emperors affected to eat in public, and in the ſight of the whole army: *In propatulo——Ante papilionem——Apertis papilionibus——Sub columellis tabernaculi.* This ſight attracted, inſtructed, and conſoled the ſoldier, and ennobled his poor diet to him, in its reſemblance to that of his maſters: *Cunctis videntibus atque gaudentibus.*

* Cibis etiam caſtrenſibus in propatulo libenter utebatur (Adrianus) hoc eſt lardo, caſeo, & poſca. *Spartian.*

† In omni expeditione (Peſcennius) militarem cibum ſumpſit ante papilionem. *Spartian.*

‡ Apertis papilionibus (Alexander) prandit atque cœnavit, cum militarem cibum, cunctis videntibus atque gaudentibus, ſumeret. *Lamprid.*

‖ Et Imperatori (Juliano) non cupediæ ciborum regio more, ſed ſub columellis tabernaculi parcius cœnaturo pultis portio parabatur exigua, etiam munifici faſtidienda gregario. *Ammian.* l. 25.

Let us compare an army of thirty thouſand men, compoſed of ſuch officers and ſoldiers as the Greeks and Romans had, robuſt, ſober, ſeaſoned, and inured to all ſorts of fatigues, with our armies of an hundred thouſand men, and the pompous train that follows them; is there a general of the leaſt ſenſe or underſtanding, that would not prefer the former? It is with ſuch troops the Greeks often checked the whole forces of the Eaſt, and the Romans conquered and ſubjected all other nations. When ſhall we return to ſo laudable a cuſtom? Will there not ſome general of an army ariſe of ſuperior rank and merit, and at the ſame time of a genius ſolid and ſenſible to true glory, who ſhall comprehend how much it is for his honour to ſhew himſelf liberal, generous, and magnificent in ſentiments and actions; to beſtow his money freely for animating the ſoldiers, or to aſſiſt the officers, whoſe income does not always ſuit their birth and merit; and to reduce himſelf in all other things, I do not ſay to that ſimplicity and poverty of the antient maſters of the world, (ſo ſublime a virtue is above our age's force of mind) but to an elegant and noble plainneſs, which, by the force of example, of great effect in thoſe that govern, may perhaps ſuggeſt the ſame to all our generals, and reform the bad and pernicious taſte of the nation?

The care of proviſions always has been, and ever will be, highly incumbent upon a good general. Cato's * maxim, *that the war feeds the war*, holds good in plentiful countries, and with regard to ſmall armies: that of the Greeks is more generally true, that *the war does not furniſh proviſions upon command, or at a fixed time.* They muſt be provided, both for the preſent and the future. One of

* Bellum, inquit Cato, ſeipſum alet. *Liv.* l. 34. n. 9.

the

the principal inſtructions Cambyſes king of Perſia gave his ſon Cyrus, who afterwards became ſo glorious, was, not to embark in any expedition, till he had firſt informed himſelf, whether ſubſiſtence were provided for the troops. Paulus Æmilius would not ſet out for Macedonia, till he had taken care of the tranſportation of proviſions. If Cambyſes and Darius had been as attentive in this point, they had not occaſioned the loſs of their armies, the firſt in Ethiopia, and the other in Scythia. That of Alexander had been famiſhed, if the counſel of Memnon, the moſt able general of his times, had been followed, which was to lay waſte a certain extent of country in Aſia minor, through which that prince was under the neceſſity of marching. Before the battle of Cannæ, Hannibal had not ten days proviſions: a delay of ſome weeks had reduced him to the laſt extremity. Cæſar, before that of Pharſalia, muſt have periſhed for want of proviſions, if Pompey would, or rather could, have waited ten or twelve days longer. Famine is an enemy, againſt whom the ability and valour of generals and ſoldiers can effect nothing, and whom the number of troops ſerves only to reinforce.

SECT. II.

Pay of the ſoldiers.

AMONGST the Greeks, the ſoldiers at firſt ſubſiſted themſelves in the field at their own expence. This was natural; becauſe they were the citizens themſelves united to defend their lands, lives, and families, and had a perſonal intereſt in the war.

The poverty, which Sparta long profeſſed, gives reaſon to believe, that they did not pay their troops. As long as the Spartans remained in Greece, the republic ſupplied them with proviſions for their public meals, and one habit yearly. Amongſt theſe proviſions there was ſome meat, and a particular officer had the diſtribution of it. We have ſeen Ageſilaus, to mortify Lyſander, who had filled the higheſt offices of the republic, give him this office, which was of no conſideration. The Spartans, during the war, contented themſelves with this allowance, adding to it ſome little plunder of the country for their better ſubſiſtence. After Lyſander had opened the way for gold and ſilver to re-enter Sparta, and had formed a public treaſury there, as the Lacedæmonians were often tranſported into Aſia minor out of their own country, the republic was no doubt obliged to ſupply them at ſuch times with ſubſiſtence by particular aids. We have ſeen the younger Cyrus, at the requeſt of Lyſander, augment the pay of thoſe who ſerved on board the galleys of the Lacedæmonians, from three oboli, uſually paid them by the Perſians, to four, which very much debauched the ſeamen from the Athenians. Sparta's ſtrength was not maritime. Though it was waſhed by the ſea upon the eaſt and ſouth, its coaſts were not advantageous for navigation,

Plut. in Ageſil. & Lyſand.

From five pence to ſix pence half-penny.

and

and it had only the port of Gytheum, which was neither very large nor commodious. And indeed its fleets were not very numerous, and had ſcarce any ſeamen but ſtrangers. It is not certainly known what pay Sparta gave her land-troops, nor whether ſhe ſupplied either the one or the other with proviſions.

Pericles was the firſt that eſtabliſhed pay for the Athenian ſoldiers, who till then had ſerved the republic without any. Beſides its being very eaſy to conciliate the people's favour by this method, a more urgent motive obliged him to introduce that change. He made war at a diſtance in Thrace, in the Cherſoneſus, in the iſles, and in Ionia, during ſeveral months together, without moleſting or ſqueeſing the allies. It was impoſſible for citizens, ſo long abſent from their lands, trades, and other means of getting their bread, (for moſt of them were artiſans, as the Lacedæmonians reproached them) to ſerve without ſome ſupport. That was a juſtice the republic owed them, and Pericles acted leſs the part of a popular magiſtrate than that of an equitable judge. He only prevented, like a wiſe politician, the deſires of the people in regard to a conduct, which was become neceſſary.

The uſual pay of the mariners was three oboli, which made half a drachma; that is to ſay, five pence French; that of the land-troops four oboli, or ſix pence half-penny; and that of the horſe a drachma, ten pence.

Good order had been eſtabliſhed for ſupporting the expences of the war. The four oldeſt and primitive tribes of Athens had increaſed to ten. At that time, for the payment of impoſts, ſix ſcore citizens were drawn out of each tribe, which made twelve hundred in all; theſe were divided into four companies of three hundred, and into twenty claſſes;

claſſes; of which each were again divided into two parts, the one of the richer citizens, the other of ſuch as were leſs ſo. The public expences fell upon the rich and opulent, but upon ſome more than others. When any urgent and ſudden neceſſity happened, that made it neceſſary to raiſe troops, or fit out a fleet, the expences were divided amongſt theſe citizens in proportion to their eſtates: the rich advanced the money, for the immediate ſervice of the republic, and the others had time allowed to reimburſe them, and pay their quota.

Plut. in Nic. p. 533. It appears from the example of Lamachus, who was ſent with Nicias to command at the ſiege of Syracuſe, that the Athenian generals ſerved at their own expence. Plutarch obſerves, that this Lamachus, who was very poor, not being in a condition to pay any thing towards the expences of the war, ſent an account to the people of what he had laid out upon his own perſon, in which his daily ſubſiſtence, cloaths, and even ſhoes and ſtockings were included.

The Roman ſoldiers, in the earlier times of the republic, ſerved without pay or gratification. The wars in thoſe days were not very diſtant from Rome, and of no long duration. As ſoon as they were terminated, the ſoldiers returned home, and took care of their affairs, lands, and families. It was not till four hundred and forty years after the building of Rome, that the ſenate, upon occaſion of the ſiege of Veii, which was very long, and continued without interruption during the winter, contrary to cuſtom decreed, without being * requeſted,

* Additum deinde, omnium maximè tempeſtivo principum in multitudinem munere, ut ante mentionem ullam plebis Tribunorumve decerneret ſenatus, ut ſtipendium miles de publico acciperet, cum ante id tempus de ſuo quiſque functus eo munere eſſet. Nihil acceptum unquam a plebe tanto gaudio traditur. Concurſum itaque ad Curiam eſſe, prehenſataſq; exeuntium manus, & patres vere appel-

queſted, that the republic ſhould pay the ſoldiers a fixed ſum for the ſervices they ſhould render it. This decree, the more agreeable to the people, as it appeared the pure effect of the ſenate's liberality, occaſioned univerſal joy; and the whole city cried out, that they were ready to ſhed their blood, and ſacrifice their lives, for ſo munificent a country.

The Roman ſenate ſhewed the ſame wiſdom upon this occaſion, as Pericles had done at Athens. The ſoldiers at firſt whiſpered, and at length openly vented their complaints and murmurs againſt the length of the ſiege, which laid them under the neceſſity of continuing remote from their families during even the winter, and by that long abſence occaſioned the ruin of their lands, which remained uncultivated, and became incapable of affording them ſubſiſtence. Theſe were the real motives of the ſenate's conduct, who artfully granted that as a favour, which neceſſity was upon the point of extorting from them by the invectives of ſome tribune of the people, who would have made it an honour to himſelf.

To anſwer this pay, a tax was laid upon the citizens in proportion to their eſtates. The ſenators ſet the example, which was followed by all others, notwithſtanding the oppoſition of the tribunes of the people. It appears that none were exempt from it, not even the augurs nor pontiffs. They were diſpenſed from paying it, during ſome years, by violent means, and their private authority. The quæſtors cited them to appear and ſee themſelves ſentenced to pay the whole arrears due from that time. They appealed to the people, who condemned them. When wars were terminated, and

Liv. l. 4. n. 60.

Liv. l. 33. n. 42.

appellatos, effectum eſſe fatentibus, ut nemo pro tam munifica patria, donec quicquam virium ſupereſſet, corpori aut ſanguini ſuo parceret. *Liv.* l. 4. n. 59.

con-

Dion. Halicarn. in Excerpt. Legat. P. 747.

considerable spoils had been taken from the enemy, part of them was applied in reimbursing the people the sums that had been raised for carrying them on: which is a very admirable, and very uncommon example of public faith. The tax, of which I speak, subsisted till the triumph of Paulus Æmilius over the Macedonians, who brought so great a quantity of riches into the public treasury, that it was thought proper to abolish it for ever.

Plut. in P. Æmil. P. 275.

Though the soldiers usually served only six months, they received pay for the whole year, as appears from several passages in Livy: This was paid them at the end of the campaign, and sometimes from six months to six months. What I have hitherto said of pay regards only the foot.

It was also * granted three years after to the horse during the same siege of Veii. The republic used to supply them with horses: they had been so generous, in a pressing necessity of the state, to declare that they would mount themselves at their own expences.

The pay of the soldiers was not always the same; it varied according to the times. It was at first only three *asses* a day for the foot: (something more than three pence French) at that time there were ten *asses* to a *denarius*, which was of the same weight and value as the Grecian drachma. The denarius was afterwards raised to sixteen asses, in the 536th year of Rome, when Fabius was dictator, at which time the pay rose from three to five pence. We ought not to be surprised at the smallness of this pay, when we consider the price of provisions. Polybius informs us, that in his time the bushel of wheat was usually sold for four oboli, or six pence half-penny French; and the bushel of barley for

Plin. l. 33. c. 3.

Polyb. l. 13. p. 103.

* Equiti certus numerus æris est assignatus. Tum primum equis (suis) merere Equites cœperunt. *Liv.* l. 5. n. 7.

half

half that price. A bushel of wheat was sufficient for a soldier for eight days.

Julius Cæsar, to confirm the soldiers the more strongly in his interest, doubled their pay, and made it amount to ten pence: *Legionibus stipendium in perpetuum duplicavit.*

There were other alterations in it under the emperors, but I do not think it necessary to enter into the detail of them. Sueton. J. Cæs. c. 26.

Polybius, after having said that the daily pay of the foot was something more than three pence, adds, that the centurions had six pence half-penny, and the horse ten-pence. *Two oboli.* *Four oboli.* *Six oboli.*

From this daily pay of five-pence, which was the usual pay in Polybius's time, the sum total yearly amounted to almost an hundred livres, without including the allowance of corn and other provisions, with which they were daily supplied. I take the year as twelve months, each of thirty days, which amount to three hundred and sixty days; and it appears that it was sometimes taken in this manner, in regard to the pay of troops.

Out of this annual sum, a part was reserved for their cloaths, arms, and tents. This Tacitus tells us: *Enimvero militiam ipsam gravem, infructuosam: denis in diem assibus animam & corpus æstimari. Hinc vestem, arma, tentoria.* And Polybius adds corn to it: *Non frumentum, non vestem, nec arma gratuita militi fuisse; sed certa horum pretia de stipendio quæstore deducta.* Annal. l. 1. c. 17.

As to what regards the great officers, consuls, proconsuls, lieutenants, prætors, proprætors, and quæstors, it does not appear, that the republic paid them for their services in any other manner, than by the honour annexed to these offices. She supplied them with the necessary and indispensable disbursements of their commissions: robes, tents, horses, mules, and all their military equipage.

They

They had a certain fixed number of ſlaves, which was not very great, and which they were not at liberty to augment, the law admitting them to take new ones only in the room of ſuch as died. In the provinces through which they paſſed, they exacted nothing but forage for their horſes, and wood for themſelves from the allies. And thoſe who piqued themſelves upon imitating the entire diſintereſtedneſs of the antients, took nothing from them. Cicero acted in this manner, as he himſelf tells Atticus in a letter. *"The people are at "no expence, ſays he, either for me, my lieute- "nants, the quæſtor, or any other officer. I ac- "cept neither of forage nor wood, though per- "mitted by the Julian law. I only conſent that "they ſupply my people with an houſe and four "beds; though they often lodge in tents." It was of the ſpirit of the Roman government not to ſuffer their generals or magiſtrates to be a charge to their allies. It was this conduct, ſo full of wiſdom and humanity, that rendered the authority of the Romans ſo venerable and amiable; and it may be ſaid with truth, that it contributed, more than their arms, to render them maſters of the univerſe.

Liv. l. 42. n. 1. Livy tells us his name who firſt infringed the Julian law, which regulated the expences that might be exacted from the allies; and his example had only too many followers, who in a ſhort time exceeded him. This was L. Poſthumius. He was angry with the inhabitants of Prænesſte, becauſe, during ſome ſtay he had made there when a pri-

* Nullus ſit ſumptus in nos, neque in legatos, neque in quæſtorem, neque in quemquam. Scito non modo nos fœnum, aut quod lege Julia dari ſolet, non accipere; ſed ne ligna quidem nec præter quatuor lectos & tectum quemquam accipere quidquam; multis locis ne tectum quidem, & in tabernaculo manere plerumque. *Epiſt.* 16. lib. 5. *ad Attic.*

vate

vate perſon, they had not treated him with the reſpect he believed his due. When he was elected conſul, he thought of revenge. Being to paſs through that city to his province, he let them know, that they muſt ſend their principal magiſtrates to meet him, to provide him lodging in the name and at the expence of the public, and to have the beaſts of burthen, that were neceſſary, in readineſs againſt his departure. Before him, ſays Livy, no magiſtrate had ever put the allies to any expence, nor exacted any thing from them. The republic ſupplied them with mules, tents, and all the carriages neceſſary to a commander, in order to prevent their taking any thing from the allies. As hoſpitality was very much honoured and practiſed in thoſe times, they lodged with their particular friends, and took great pleaſure in receiving them at Rome in their turn, when they came thither. When they ſent lieutenants upon any ſudden expedition, the cities through which they paſſed received orders to ſupply them with an horſe, and nothing more. * Though the conſul might have had a juſt cauſe of complaint againſt the people of Prænefte, he ought not to have uſed, or rather abuſed, the authority of his office, to make them ſenſible of it. Their ſilence, whether the effect of moderation or exceſſive timidity, prevented them from laying their complaints before the Roman people, and authoriſed the magiſtrates from thenceforth to make that new yoke heavier every day; as if impunity, in the firſt inſtance, had implied the approbation of Rome, and had given them a kind of right to act the ſame thing.

* Injuria *(the ſenſe requires* Ira *to be read)* conſulis etiamſi juſta, non tamen in magiſtratu exercenda, & ſilentium nimis aut modeſtum aut timidum Prænefinorum, jus veluti probato exemplo magiſtratibus fecit graviorum in dies talis generis imperiorum. *Liv.*

The

The antient Romans, far from behaving in this manner, or endeavouring to inrich themſelves at the expence of the allies, had no thoughts but of protecting and defending them. They believed themſelves ſufficiently paid by the glory of their exploits, and often, after great victories and illuſtrious triumphs, died in the arms of poverty, as they had lived. The Grecian and Roman hiſtories abound with examples of this kind.

SECT. III.

Antient arms.

IT is not my deſign in this place to deſcribe all the various kinds of arms uſed by the ſoldiery of all nations. I ſhall confine myſelf principally, according to my cuſtom, to thoſe of the Greeks and Romans, who, in this reſpect, had many things common to both. The Romans had borrowed the uſe of moſt of them from the Tuſcans and Greeks, who inhabited Italy. Florus obſerves, that * Tarquinius Priſcus, who was deſcended from the Corinthians, introduced abundance of the Grecian cuſtoms at Rome.

Armour was antiently of braſs, and afterwards of iron. The poets often uſe one for the other.

The armour of the Greeks, as well as that of moſt other nations, was, in the earlieſt ages, the helmet, the cuiraſs, the ſhield, the lance, and the ſword. They uſed alſo the bow and the ſling.

The helmet was a defenſive armour for the head and neck. It was either of iron or braſs, often in the form of the head, open before, and leaving the face uncovered. There were head-pieces that might

* Tarquinius Priſcus—oriundus Corintho, Græcum ingenium Italicis artibus miſcuit. *Flor.* l. 1. c. 5.

be

be let down to cover the face. Upon the top of them they placed figures of animals, lions, leopards, griffins, and others. They adorned them with plumes of feathers, which floated in the wind, and exalted their beauty.

The cuiraſs was called in Greek θώραξ, a name which has been adopted into the Latin, that however more frequently uſes the word *lorica*. At firſt cuiraſſes were made either of iron or braſs, in two pieces, as they are in theſe days: theſe two pieces were faſtened upon the ſides by buckles. Alexander left the cuiraſs only the two pieces which covered the breaſt, that the fear of being wounded in the back, which had no defence, might prevent the ſoldiers from flying. Polyæn. Demetr. l. 4.

There were cuiraſſes of ſo hard a metal, that they were abſolutely of proof againſt weapons. Zoilus, an excellent artiſt in this way, offered two of them to Demetrius, ſirnamed Poliorcetes. To ſhew the excellency of them, he cauſed a dart to be diſcharged at them out of the machine, called a catapulta, at the diſtance of only twenty-ſix paces. How violently ſoever the dart was ſhot, it made no impreſſion, and ſcarce left the leaſt mark upon the cuiraſs. Plut. in Demetr. p. 898.

Many nations made their cuiraſſes of flax or wool: theſe were coats of arms made with many folds, which reſiſted, or very much broke, the force of blows. That with which Amaſis preſented the Lacedæmonians, was of wonderful workmanſhip, adorned with figures of various animals, and embroidered with gold. What was moſt ſurpriſing in this cuiraſs was, that every thread in it, though very ſmall, was compoſed of three hundred and ſixty ſmaller, which it was not difficult to diſtinguiſh. Herod. l. 3. c. 47.

I have ſaid that the cuiraſs was called *lorica* in Latin. This word comes from *lorum*, a thong or

ſtrap of leather, becauſe made of the ſkin of beaſts. And from the French word *cuir* alſo *cuiraſs* is derived. The cuiraſs of the Roman legions conſiſted of thongs, with which they were girt from the armpits to the waiſt. They were alſo made of leather, covered with plates of iron, in the form of ſcales, or of iron rings twiſted within one another, in the form of chains. Theſe are what we call *coats of mail*, in Latin, *lorica hamis conſerta*, or *hamata*.

With the *thorax* of the Greeks the ſoldier was much leſs capable of motion, agility, and force: whereas the girts of leather, ſucceſſively covering each other, left the Roman ſoldier entire liberty of action, and, fitting him like a veſt, defended him againſt darts.

The buckler was a defenſive piece of armour, proper to cover the body. There were different ſorts of them.

Scutum, θυρεὸς, or σακος. The ſhield. This buckler was long, and ſometimes of ſo immoderate a ſize, that it would cover a man almoſt from head to foot. Such were thoſe of the Egyptians mentioned by Xenophon. It muſt have been very large amongſt the Lacedæmonians, as they could carry the body of one who had been killed upon it. From whence came the celebrated injunction of a Spartan mother to her ſon, when he ſet out for the war: Ἢ τὰν, ἢ ἐπὶ τᾶν, that is to ſay, *Either bring back this buckler, or return upon it.*

Cyrop. l. 7. p. 178.

It was the greateſt diſgrace to return from battle with the loſs of the buckler; undoubtedly, becauſe it ſeemed to argue, that the ſoldier had quitted it to fly the more eaſily, without regard to any thing but ſaving his life. The reader may remember, that Epaminondas, mortally wounded in the celebrated battle of Mantinæa, when he was carried off into his tent, aſked immediately,

with

with concern and emotion, whether his buckler was safe.

Clypeus, ἀσπὶς. It is often confounded with the *Scutum*. It is, however, certain, that they were different; because, in the *census*, or muster, made by Servius Tullius, the *clypeus* is given to those of the first class, and the *scutum* to those of the second. And in fact the *scutum* was long and square: the *clypeus* round and shorter. Both had been used by the Romans in the time of the kings. After * the siege of Veii, the *scutum* became more common. The † Macedonians always made use of the *clypeus*, except perhaps in later times.

The buckler of the Roman legions was convex, and in the form of a gutter-tile. According to Polybius it was four feet long, and two and an half broad. These bucklers were antiently made of wood, says Plutarch, in the life of Camillus: but this Roman general caused them to be covered with plates of iron, to make them the better defence against blows. Plut. in Cam. p. 150.

The *Parma* was a small round buckler, lighter and shorter than the *scutum*, used by the heavy-armed infantry. The light-armed foot and the cavalry had this shield.

The *Pelta* was almost the same thing with that called *cetra*. This buckler was light, in the form of a half moon, or semi circle, on the top.

The Sword. The forms of it were very different, and in great number: I shall not amuse the reader with describing them, but content myself with remarking, ‡ that there were long swords

* Clypeis antea Romani usi: deinde, postquam facti sunt stipendiari, scuta pro clypeis fecere. *Liv.* l. 8. n. 8.

† Arma, clypeus, sariſſæque illis (Macedonibus:) Romano scutum, majus corpori tegumentum. *Liv.* l. 9. n. 19.

‡ Gallis Hispanisque scuta ejusdem formæ ferè erant, dispares ac dissimiles gladii. Gallis prælongi, ac sine mucronibus: Hispano, punctim magis quàm cæsim assueto petere hostem, brevitate habiles, & cum mucronibus. *Liv.* l. 22. n. 46.

without points, which ſerved to ſtrike with the edge, as were thoſe of the Gauls, of which we ſhall ſoon ſpeak. There were others ſhorter and ſtronger, which had both point and edge, *punctim & cæſim*, ſuch as the Spaniſh ſabres were, which the Romans borrowed from them, and uſed ever after with advantage. * With theſe ſabres they cut off arms and heads, and made moſt horrible wounds, at one blow.

The manner, in which the ſword was worn by the antients, was not always alike. The Romans generally wore it on the right thigh, to leave room, without doubt, for the moving of the buckler with more freedom, which was on the left ſide: but, in certain remains of antiquity, we ſee that their ſoldiers wore them on the left.

It is remarkable, that neither the Greeks nor Romans, the two moſt warlike nations of the world, wore ſwords in times of peace; nor was duelling known amongſt them.

PIKES or LANCES were uſed by almoſt all nations. Thoſe which we ſee upon the monuments, made in the times of the Roman emperors, are about ſix feet and an half long, including the iron point.

The *Sariſſa* of the Macedonians was of ſo prodigious a length, that one could ſcarce believe ſuch a weapon could be uſed, if all the antients did not agree in this point. They give it a length of ſixteen cubits, which makes eight yards.

BOWS and ARROWS are of the moſt remote antiquity. There were few nations who did not uſe them. The Cretans were eſteemed excellent archers. We do not find that the Romans uſed the bow in the earlieſt times of the republic. They

* Gladio Hiſpanienſi detruncata corpora brachiis abſciſſis, aut tota cervice delecta, diviſa à corpore capita, patentiaque viſcera, & fœditatem aliam vulnerum viderunt. *Liv.* l. 31. n. 34.

introduced

introduced it afterwards; but it appears that they had ſcarce any archers except thoſe of the auxiliary troops.

The SLING was alſo an inſtrument of war much uſed by many nations. The Balearians, or the people of the iſlands now called Majorca and Minorca, excelled at the ſling. They were ſo attentive in exerciſing their youth in the uſe of it, that they did not give them their food in the morning till they had hit a mark. The Balearians were very much employed in the armies of the Carthaginians and Romans, and greatly contributed to the gaining of victories. * Livy mentions ſome cities of Achaia, Egium, Patræ, and Dymæ, whoſe inhabitants were ſtill more dexterous at the ſling than the Balearians. They threw ſtones farther, and with greater force and certainty, never failing to hit what part of the face they pleaſed. Their ſlings diſcharged the ſtones with ſo much force, that neither buckler nor head-piece could reſiſt their impetuoſity; and † the addreſs of thoſe who managed them was ſuch, according to the Scripture, that they could hit an hair, without the ſtones going either on one ſide or the other. Inſtead of ſtones they ſometimes charged the ſling with balls of lead, which it carried much farther. Veget. de re milit. l. 1. c. 16.

JAVELINS. There are two ſorts of them, which are:

Ῥόμφαια: *haſta*. I call it javelin. It was a kind of dart not unlike an arrow, the wood of which was generally three feet long, and one inch thick. The point was four inches long, and tapered to ſo fine an end, that it bent at the firſt ſtroke in ſuch

* Longiùs, certiuſque, & validiore ictu quam Balearis funditor, eo telo uſi ſunt—Non capita ſolum hoſtium vulnerabant, ſed quem locum deſtinâſſent oris. *Liv.* l. 38. n. 29.

† *Among all this people there were ſeven hundred men left-handed, every one could ſling ſtones at an hair-breadth, and not miſs.* Judg. xx. 16.

a manner, as to be uſeleſs to the enemy. The light-armed troops uſed it. * They carried ſeveral javelins in their left hand, with which they held their buckler, in order to have the right free, either to dart javelins at a diſtance, or to uſe the ſword. † Livy gives each of them ſeven javelins.

Ἄσσος: *Pilum.* I call this the *great javelin* ‡, becauſe thicker and ſtronger than the other. The legions darted it at the enemy, before they came to cloſe fight. When they had neither time nor room, they threw it upon the ground, and charged the enemy ſword in hand.

The CAVALRY had almoſt the ſame arms as the foot: the helmet, the cuiraſs, the ſword, the lance, and a ſmaller or lighter buckler.

We ſee in Homer, that in the Trojan war the moſt diſtinguiſhed perſons rode on chariots drawn by good horſes, with an eſquire or charioteer, in order to charge through battalions with the greater vigour, and to fight with more advantage from them. But people were ſoon undeceived in theſe points, by the double inconvenience of being ſtopped ſhort by hedges, trenches, and ditches; or remaining uſeleſs in the midſts of the enemy, when the horſes were wounded.

The uſe of chariots armed with ſcythes was afterwards introduced. Theſe were placed in the front of the battle, to begin it by breaking the enemy.

* Et cum cominus venerant, gladiis a velitibus trucidabantur. Hic miles tripedalem parmam habet, & in dextra haſtas, quibus eminus utitur—Quod ſi pede collato pugnandum eſt, tranſlatis in lævam haſtis, ſtringit gladium. *Liv.* l. 38. n. 21.

† Eis parmæ breviores quam equeſtres, & ſeptena jacula quaternos longa pedes data, præfixa ferro, quale haſtis velitaribus ineſt. *Liv.* l. 26. n. 4.

‡ Arma Romano ſcutum —— & pilum haud paulo quam haſta vehementius ictu miſſuque telum. *Liv.* l. 9. n. 19.

This

This manner of fighting was at firſt in great uſe amongſt all the people of the Eaſt, and was believed deciſive with regard to victory. The people who excelled moſt in the art of war, as the Greeks and Romans, did not adopt it; finding by experience, that the cries of the troops attacked in this manner, the diſcharges of the light-armed ſoldiers, and, ſtill more than either, the unevenneſs of the ground, rendered all the equipage of theſe chariots ineffectual, and often even pernicious to thoſe who employed them.

The nations who had elephants amongſt them, as thoſe of the Eaſt and Africa, believed that thoſe animals, no leſs docile than terrible from their force and enormous ſize, might be of great uſe to them in battles. Accordingly, when inſtructed and guided with art, they did them great ſervice. They carried their guides upon their backs, and were uſually placed in the front of their armies. Advancing from thence, they broke the cloſeſt ranks with an impetuoſity that nothing could reſiſt, cruſhed whole battalions with their vaſt weight, and diffuſed univerſal terror and diſorder. To improve their effect, towers were placed on their backs, which were like portable baſtions, from the tops of which choſen troops diſcharged darts and javelins upon the enemy, and compleated their defeat.

This cuſtom ſubſiſted long amongſt the nations I ſpeak of, from whom it paſſed to other people, who had learned by fatal experience, how capable thoſe animals were of contributing to victories. Alexander, having conquered the nations ſubject to the Perſian empire, and afterwards India, began to make uſe of elephants in his expeditions; and his ſucceſſors, in their wars with each other, rendered the uſe of them very common. Pyrrhus tranſported

ſome into Italy; and the Romans learned of that general, and afterwards of Hannibal, the advantage to be made of them in a day of battle. * It was in the war againſt Philip, that they uſed them for the firſt time.

But this advantage, as great as it appeared, was balanced by inconveniences that at length made them diſapprove of the uſe of elephants. The generals, inſtructed by experience, rendered the attack of thoſe beaſts ineffectual, by ordering their troops to open and give them free paſſage. Beſides this, the frightful cries of the enemy's army, joined with an hail of darts and ſtones, diſcharged on all ſides by the archers and ſlingers, put them into confuſion, made them mad and furious, and often obliged them to turn upon their own troops, and commit the havock amongſt them intended againſt the enemy. At ſuch times, he who guided the elephant was obliged, for avoiding that misfortune, to plunge an iron ſpike into their heads, upon which they fell dead immediately.

Liv. l. 27. n. 49.

Camels, beſides being employed to carry, were alſo of ſervice in battles. They had this convenience in them, that in dry and ſandy countries they could ſupport thirſt with eaſe. Cyrus made great uſe of them in the battle againſt Crœſus, and they contributed very much to the victory he gained over him, becauſe the horſes of the latter, not being able to ſupport the ſmell of them, were immediately put into diſorder. We find, in Livy, the Arabian archers mounted on camels with ſwords of ſix feet long, to reach the enemy from the high backs of thoſe animals. Sometimes two Arabian archers ſat back to back upon the ſame camel, in

Veget. l. 3. c. 23. Xenoph. in Cyrop. l. 7. p. 176.

Liv. l. 37. n. 40.

* Conſul in aciem deſcendit, ante ſigna prima locatis elephantis: quo auxilio tum primùm Romani, quia captos aliquot bello Punico habebant, uſi ſunt. *Liv.* l. 31. n. 36.

order

order to be able, even in flying, to discharge their darts and arrows against their pursuers.

Neither the elephants nor camels were of any service in armies, in comparison with that of the horse. That animal seems designed by nature for battles. There is something martial in his air, his chest, his pace, as Job so well observes in his admirable description of him. Job xxxix. 19—25.

In many countries, the horse as well as horseman were entirely covered with armour of iron: these were called *cataphracti equites*.

But what is hard for us to comprehend, amongst all the antient people, the horse had neither stirrups nor saddle, and the riders never used boots. Education, exercise, and habit, had accustomed them not to want those aids; and even not to perceive that there was any occasion for them. There were some horsemen, such as the Numidians, who did not know so much as the use of bridles to guide their horses, and who, notwithstanding, by their voice only, or the use of the heel or spur, made them advance, fall back, stop, turn to the right or left; in a word, perform all the evolutions of the best disciplined cavalry. Sometimes, having two horses, they leaped from one to the other even in the heat of battle, to ease the first when fatigued. These Numidians, as well as the Parthians, were never more terrible, than when they seemed to fly through fear and cowardice. For then, facing suddenly about, they discharged their darts or arrows upon the enemy, who expected nothing less, and fell upon them with more impetuosity than ever.

I have related hitherto what I found most important concerning the arms of the antients. In all times the great captains had a particular attention to the armour of their troops. They did not care whether they glittered or not with gold and silver;

ſilver; they left ſuch idle ornaments to ſoft and effeminate nations, like the Perſians. They * approved a more lively and martial brightneſs, one that might inſpire terror, ſuch as was that of ſteel and braſs.

Xenoph. Cyrop. l. 2. p. 40.

It was not only the brightneſs, but the quality of the arms in particular, to which great generals were attentive. The ability of Cyrus the Great, was juſtly admired, who, upon his arrival at the camp of his uncle Cyaxares, changed the arms of his troops. Moſt of them uſed almoſt only the bow and javelin, and conſequently fought only at a diſtance; a kind of fight, wherein the greater number had eaſily the ſuperiority. He armed them with bucklers, cuiraſſes, and ſwords or axes, in order to their being in a condition to come to cloſe fight immediately with the enemy, whoſe multitude thereby became uſeleſs. Iphicrates, the celebrated general of the Athenians, made ſeveral uſeful alterations in the armour of the ſoldiers, in regard to their ſhields, pikes, ſwords, and cuiraſſes.

Plut. in Philop. p. 360.

Philopœmen alſo, as I have obſerved in its place, changed the armour of the Achæans, which, before him, was very defective; and that alteration did not a little contribute to render them ſuperior to all their enemies. There are many examples of this kind, which it would be too long to repeat here, that ſhew, of what advantage to an army is the ability of a general, when applied to reforming whatever may be defective; and how dangerous it it is tenaciouſly to retain cuſtoms eſtabliſhed by length of time, without daring to make any alterations in them, however judicious and neceſſary.

* Macedonum diſpar acies erat; equis viriſque, non auro, non diſcolori veſte, ſed ferro atque ære fulgentibus. *Q. Curt.* l. 3. c. 3.

No

No people were ever more remote from this ſcrupulous attachment than the Romans. Having attentively ſtudied what their neighbours and enemies practiſed, they well knew how to apply it to their own advantage; and by the different alterations they introduced in their armies, as well with regard to their armour, as whatever elſe related to military affairs, they rendered themſelves invincible.

ARTICLE IV.

SECT. I.

Preliminary cares of the general.

ALL that we have ſeen hitherto, the raiſing of troops, their pay, their arms, their proviſions, is in a manner only the mechaniſm of war. There are other ſtill more important cares, that depend upon the general's ability and experience.

Thoſe, who have diſtinguiſhed themſelves moſt in the knowledge of military affairs, have always believed it particularly incumbent on the general to ſettle the plan of the war; to examine whether it is moſt neceſſary to act upon the offenſive or defenſive; to concert his meaſures for the one or the other of thoſe purpoſes; to have an exact knowledge of the country into which he marches his army; to know the number and quality of the enemy's troops; to penetrate, if poſſible, his deſigns; to take proper meaſures at diſtance for diſconcerting them; to foreſee all the events that may happen, in order to be prepared for them; and to keep

keep all his resolutions so well disguised and so secret, that no part of them escapes him and takes air. In this last point, perhaps, nothing was ever better observed than amongst us, in the war lately 1736. terminated; which is not a little for the honour of the ministry and officers.

Liv. l. 44. n. 18. We have seen, in the war against Perseus, the wise precautions taken by Paulus Emilius, before opening the campaign, that nothing might be wanting to the success of it; which precautions were the principal cause of his conquering that prince.

It is upon these preliminary provisions the success of enterprises depends. And it was by them Cyrus began, as soon as he arrived in the camp of his uncle Cyaxares, who had not thought of taking any such measures.

It is amazing to consider the orders given by the same Cyrus, before he marched against the enemy; and the immense detail into which he entered with respect to all the necessaries of the army.

He was to march fifteen days through countries that had been destroyed, and in which there were neither provisions nor forage: he ordered enough of both for twenty days to be carried, and that the soldiers, instead of loading themselves with baggage, should exchange that burthen for an equal one of provisions, without troubling themselves about beds or coverlids for sleeping, the want of which their fatigue would supply. They were accustomed to drink wine, and, to prevent the sudden change of their drink from making them sick, he ordered them to carry a certain quantity with them, and to use themselves by degrees to do without it, and to content themselves with water. He advised them also to carry salt provisions along with them,

hand-

hand-mills for grinding corn, and medicines for the ſick: to put into every carriage a ſickle and a mattock, and upon every beaſt of burthen an ax and a ſcythe, and to take care to ſupply themſelves with a thouſand other neceſſaries. He carried alſo along with him ſmiths, ſhoemakers, and other workmen, with all manner of tools uſed in their trades. For the reſt, he declared publicly, that whoever would charge himſelf with the care of ſending proviſions to the camp, ſhould be honoured and rewarded by himſelf and his friends; and even if they wanted money for that ſervice, provided they would give ſecurity, and engage to follow the army, he would aſſiſt them with it. A detail of this kind, part of which I have omitted, is not unworthy of a general, nor a great prince, as Cyrus was.

We ſee in Pericles's harangue to the Athenians, in regard to the Peloponneſian war, how much that great man, who adminiſtered the affairs of his republic with ſo much wiſdom, excelled in the ſcience of war, and how vaſt and profound his foreſight was. He regulated the plan of the war, not only for one campaign, but for its whole duration; and ſettled it upon the perfect knowledge he had himſelf, and imparted to the Athenians, of the Lacedæmonian forces. He determined them to ſhut themſelves up within their walls, and to ſuffer their lands to be ruined, rather than hazard a battle againſt an army much more numerous than their own; whilſt, on his ſide, he went with a fleet to ravage the whole coaſt of Peloponneſus. He recommended to them eſpecially not to form any enterpriſes abroad, and not to think of any new conqueſts, upon which conditions he aſſured them of victory. It was from deſpiſing this advice, and carrying their arms into Sicily, that the Athenians were ruined. Thucyd. l. 9.

Was

Was there ever any thing more wiſe or better concerted than Hannibal's plan of attacking the Romans in their own country! He propoſed the ſame deſign to Antiochus, which would have diſtreſſed the Romans exceedingly, had he followed it: but that prince had neither ſufficient extent of mind, nor diſcernment enough, to comprehend its whole advantage and wiſdom.

Alexander had perhaps been ſtopped ſhort, reduced by famine, and obliged to retreat into his own kingdom, if Darius, as we have obſerved above, had deſtroyed the country through which his army was to paſs, and had made a powerful diverſion in Macedonia, as Memnon, one of his generals, and one of the greateſt captains of antiquity, adviſed him.

To form ſuch plans is not to make war from day to day, and in a manner by chance, and to wait till events determine us; but to act like a great man, and with a juſt knowledge of the cauſe we have in hand. * Enterpriſes, concerted with ſo much wiſdom, ſeldom fail of ſucceſs.

* Qui victoriam cupit, milites imbuat diligenter. Qui ſecundos optat eventus, dimicet arte, non caſu. *Veget.* l. 3. *In prologo.*

SECT.

SECT. II.

Departure and march of the troops.

THE beginning and end of the war, the departure and return of the troops, were always ſolemniſed by public acts of religion and ſacrifices. Xenoph. in Cyrop. l. 1.

The reader undoubtedly remembers, that, in the advice Cambyſes, king of the Perſians, gave his ſon Cyrus, when he ſet out for his firſt campaign, he inſiſted principally upon the neceſſity of not undertaking any action great or ſmall, either for himſelf or others, without having firſt conſulted the gods, and offered ſacrifices to them. He obſerved this counſel with ſurpriſing exactneſs. When he arrived upon the frontiers of Perſia, he ſacrificed victims to the gods of the country, and to thoſe of Media, as ſoon as he entered it, to implore their aid, and that they would be propitious to him. His hiſtorian is not aſhamed to repeat in many places, that this prince took great care, upon all occaſions, to diſcharge this duty, upon which he made the whole ſucceſs of his enterpriſes depend. Xenophon himſelf, a warrior and philoſopher, never engaged in any important affair, without having firſt conſulted the gods. Ibid. l. 2.

All Homer's heroes appear very religious, and have recourſe to the divinity, on all occaſions and dangers.

Alexander the Great did not quit Europe, and enter Aſia, without having firſt invoked the divinities of both.

Hannibal,

Liv. l. 21. n. 21. Hannibal, before he engaged in the war against the Romans, went expresly to Cadiz, to acquit himself of the vows he had made to Hercules, and to implore his protection by new ones, for the success of the expedition he had undertaken.

The Greeks were very religious observers of this duty. Their armies never took the field without being attended by aruspices, sacrificers, and other interpreters of the will of the gods, of which they believed it their duty to be assured before they hazarded a battle.

But, of all the nations of the world, the Romans were the most exact in their recourse to the divinity, either * in the beginning of their wars, in the great dangers to which they found themselves sometimes exposed, or after their victories; and ascribed the success of their arms solely to the care they had taken to render this homage to their gods.

They were mistaken in the object, not the principle; and this universal custom of all nations shews, that they always acknowledged a supreme almighty Being, who governed the world, and disposed at his will of all events, and in particular of those of war, attentive to the prayers and vows addressed to him.

* Ejus belli (contra Annibalem) causâ supplicatio per urbem habita, atque adorati dii, ut bene ac feliciter eveniret quod bellum populus Romanus jussisset. *Liv.* l. 21. n. 17.

Civitas religiosa, in principiis maximè novorum bellorum, supplicationes habuit. *Id.* l. 31. n. 9.

March of the army.

When every thing was ready, and the army aſſembled at the time and place fixed, it began to march. To avoid prolixity, I ſhall ſpeak only of the Romans in this place: from whence the Reader may form a judgment of other nations.

It is amazing to conſider the loads under which the ſoldiers marched. Beſides their arms, ſays * Cicero, the buckler, the ſword, the helmet, (the javelins, or half-pikes, might be added) beſides theſe arms which they conſidered no more as a burthen than their limbs, for they ſaid their arms were in a manner a ſoldier's members, they carried proviſions for ſeveral days, and ſometimes for three weeks or a month, with all the implements for dreſſing their food, and each a ſtake or paliſado of conſiderable weight. † Vegetius recommends the exerciſing young ſoldiers, in carrying a weight of above five and forty pounds a day's march in the uſual pace of the army, in order to their being accuſtomed to it againſt times of occaſion and ne-

* Noſtri exercitus primùm unde nomen habeat, vides. Deinde qui labor, quantus agminis! ferre plus dimidiati menſis cibaria, ferre ſi quid ad uſum velint, ferre vallum: nam ſcutum, gladium, galeam in onere noſtri milites non plus numerant quam humeros, lacertos, manus. Arma enim membra militis eſſe ducunt; quæ quidem ita gerunt aptè, ut, ſi uſus foret, abjectis oneribus, expeditis armis, ut membris, pugnare poſſint. *Cic. Tuſcul.* 2. n. 37.

† Pondus quoque bajulare uſque ad 60 libras & iter facere gradu militari, frequentiſſimè cogendi ſunt juniores, quibus in arduis expeditionibus neceſſitas imminet annonam pariter & arma portandi. *Veget.* l. 1. c. 19.

ceſſity. * And this was the practice of the antient Roman ſoldiers.

Veget. l. 1. c. 27. The uſual † march of the Roman army, according to Vegetius, was twenty thouſand paces a day; that is to ſay, at leaſt ſix leagues, allowing three thouſand paces to each league. Three times a month, to accuſtom the ſoldiers to it, the foot as well as horſe were obliged to take this march.

De bell. Gall. l. 7. By an exact calculation of what Cæſar relates of a ſudden march, which he made at the time he beſieged Gergovia, we find that in four and twenty hours he marched fifty thouſand paces. This he did with the utmoſt expedition. In reducing it to leſs than half, it makes the uſual day's march of ſix leagues.

Xenoph. de Exped. Cyr. l. 7. p. 427. Xenophon regularly ſets down the days marches of the troops, who returned into Greece after the death of the younger Cyrus, and made the fine retreat ſo much celebrated in hiſtory. All theſe marches, one with the other, were ‡ ſix paraſanga's, that is to ſay, more than ſix of our leagues. The uſual marches of our armies are far from being ſo long; and it is not eaſy to comprehend how the antients made them ſo. Their meaſures have varied very much, which perhaps is the reaſon of this difference between their day's march and ours.

* Non ſecus ac patriis acer Romanus in armis
Injuſto ſub faice viam cum carpit, & hoſti
Ante expectatum poſitis ſtat in agmine caſtris.
Virg. Georg. l. 3.

As when the warlike Roman under arms,
Charg'd with a baggage of unequal weight,
Purſues his march, and unexpected ſtands
Pitching his ſudden tent before the foe. Trap.

† Militari gradu viginti millia paſſuum horis duntaxat quinque æſtivis conficienda ſunt. *Veget.* l. 1. c. 9.

‡ *The Paraſanga was a Perſian meaſure of the ways. The leaſt conſiſted of thirty ſtadia, each ſtadium of a hundred and twenty-five geometrical paces.*

The

The conſul, and even the dictator, marched at the head of the legions on foot, becauſe the greateſt force of the Romans conſiſting in the infantry, they believed it neceſſary for the general to remain always at the head of the battalions. But, as age or infirmity might diſable the dictator to ſupport that fatigue, * before he ſet out for the army, he applied to the people, to demand a diſpenſation from obſerving that law eſtabliſhed by antient cuſtom, and permiſſion to ride on horſeback. † Suetonius repreſents Julius Cæſar as indefatigable, marching at the head of his armies, ſometimes on horſeback, but generally on foot, and bareheaded, however the ſun ſhined, or how hard ſoever it rained. ‡ Pliny praiſes Trajan, for having accuſtomed himſelf early to march on foot at the head of the legions under his command, without ever uſing either chariot or horſe, though he had immenſe countries to traverſe; and he always did the ſame after he became emperor. Cæſar, of whom I ſpoke juſt before, either ſwam or forded rivers. It was in order to be able to do the ſame, and to ſupport all the fatigues of war, that the young Romans exerciſed themſelves in horſe and foot races, and, all covered with ſweat after ſuch violent exerciſes, threw themſelves into the Tyber, and ſwam over it. Care was taken to form thoſe for ſeveral years that were to recruit the legions, and had not ſerved before. For this purpoſe they made choice of the moſt healthy, the moſt active, and the moſt robuſt. They were exer-

* Dictator tulit ad populum, ut equum aſcendere liceret. *Liv.* l. 23. n. 14.

† Laboris ultra fidem patiens erat: in agmine nonnunquam equo, ſæpius pedibus anteibat, capite detecto ſeu ſol ſeu imber eſſet. *Sueton. in Jul. Cæſ.*

‡ Per hoc omne ſpatium cum legiones duceres——non vehiculum unquam, non equum reſpexiſti. *Plin. in Trajan.*

ciſed by fatigues, marches, and toils, which were gradually increaſed; and ſuch as experience ſhewed to be unequal to this diſcipline were diſmiſſed, and only tried ſoldiers retained, who formed a body of choſen troops.

It was this manly, hardy, and robuſt education, which at Rome, and long before at Sparta, and in Perſia, in the time of Cyrus, made the ſoldiery indefatigable and invincible.

SECT. III.

Conſtruction and fortification of the camp.

I Suppoſe the army upon a march. Though it were ſtill in the territory of Rome, and had only one night to paſs in a place, it incamped in all the forms, with no other difference, than that the camp was leſs fortified there perhaps than in the enemy's country. From thence comes this manner of ſpeaking ſo uſual in Latin authors, *primis caſtris*, *ſecundis caſtris*, &c. at the firſt camp, at the ſecond camp: to ſignify the firſt or ſecond day's march; becauſe, however ſhort their ſtay was to be in a place, they never failed to form a camp in it. They called it *ſtativa*, when they were to ſtay ſeveral days in it: *ibi plures dies ſtativa habuit.*

Liv. l. 37.

This exactneſs of the Romans in their own country ſufficiently intimates their ſtrictneſs when in ſight of, or near, the enemy. It was a law amongſt them, eſtabliſhed by long cuſtom, never to hazard a battle, till they had finiſhed their camp. We have ſeen Paulus Emilius ſpend and arreſt the ardour of his whole army to attack Perſeus, for no other reaſon, but becauſe they had not formed their

their camp. * In the war with the Gauls, the commanders of the Roman army were reproached with having omitted this wife precaution, and the loſs of the battle of Allia was partly attributed to it. The ſucceſs of arms being uncertain, the Romans wiſely took care to ſecure themſelves a retreat in caſe of the worſt. The fortified camp put a ſtop to the enemy's victory, received the troops that retired in ſafety, inabled them to renew the battle with more ſucceſs, and prevented their being entirely routed; whereas, without the refuge of a camp, an army, though compoſed of good troops, was expoſed to a final defeat, and to being inevitably cut to pieces.

The camp was of a ſquare form, contrary to the cuſtom of the Greeks, who made theirs round. † The citizens and allies divided the work equally between them. If the enemy were near, part of the troops continued under arms, whilſt the reſt were employed in throwing up the intrenchments. They began by digging trenches of greater or leſs depth, according to the occaſion. They were at leaſt eight feet broad by ſix deep: but they were often twelve feet in breadth, and ſometimes more, to fifteen or twenty. Of the earth dug out of the foſſé, and thrown up on the ſide of the camp, they formed the parapet or breaſt-work, and, to make it the firmer, they mingled it with turf cut in a certain ſize and form. Upon the brow of this parapet the paliſadoes were planted. I ſhall re-

* Ibi Tribuni militum non loco caſtris ante capto, non præmunito vallo quò receptus eſſet —— inſtruunt aciem. *Liv.* l. 5. n. 37.

† Trifariam Romani muniebant, alius exercitus prælio intentus ſtabat. *Liv.*

Cæſar——ſingula latera caſtrorum ſingulis attribuit legionibus munienda, foſſamque ad eandem magnitudinem præfici jubet; reliquas legiones in armis expeditas contra hoſtem conſtituit. *Cæſ. de bell. civil.* l. 1.

peat all that Polybius remarks upon these stakes, with which the intrenchment of the camp was strengthened, though I have already done it elsewhere, because this is the proper place for it. He speaks of them, upon the occasion of the order given by Q. Flaminius to his troops, to cut stakes against the time they should have occasion to use them.

Polyb. l. 17. p. 754, 755.

This custom, says Polybius, which is easy to put in practice amongst the Romans, passes for impossible with the Greeks. They can hardly support their own weight upon their marches: whilst the Romans, notwithstanding the buckler which hangs at their shoulders, and the javelins which they carry in their hands, load themselves also with stakes or palisadoes, which are very different from those of the Greeks. With the latter, those are best which have many strong branches about the trunk. The Romans, on the contrary, leave only three or four at most upon it, and that only on one side. In this manner a man can carry two or three bound together, and much more use may be made of them. Those of the Greeks are more easily pulled up. If the stake be fixed by itself, as its branches are strong, and in great number, two or three soldiers will easily pull it away; and thereby an opening is made for the enemy, without reckoning that the neighbouring stakes will be loosened, because their branches are too short to be interwoven with each other. But this is not the case with the Romans. The branches of their palisadoes are so strongly inserted into each other, that it is hard to distinguish the stake they belong to. And it is as little practicable to thrust the hand through these branches to pull up the palisadoes, because, being well fastened and twisted together, they leave no opening, and are carefully sharpened

ſharpened at their ends. Even though they could be taken hold of, it would not be eaſy to pull them out of the ground, and that for two reaſons. The firſt is, becauſe they are driven in ſo deep, that they cannot be moved; and the ſecond, becauſe their branches are interwoven with each other in ſuch a manner, that one cannot be ſtirred without ſeveral more. Two or three men might unite their ſtrength in vain to draw one of them out, which, however, if they effected by drawing it a great while to and fro till it was looſe, the opening it would leave would be almoſt imperceptible. Theſe ſtakes, therefore, have three advantages. They are every-where to be had; they are eaſy to carry; and are a ſecure barrier to a camp, becauſe very difficult to break through. In my opinion (ſays Polybius, in the concluſion he deduces from all he ſays) there is nothing, practiſed by the Romans in war, more worthy of being imitated.

The form, dimenſion, and diſtribution of the different parts of the camp were always the ſame; ſo that the Romans knew immediately where their tents were to be pitched. The Greeks differed from them in this. When they were to incamp, they always choſe the place that was ſtrongeſt by its ſituation, as well to ſpare themſelves the trouble of running a trench round their camp, as becauſe they were convinced, that the fortifications of nature were far more ſecure than thoſe of art. From thence aroſe the neceſſity of giving their camps all ſorts of forms, according to the nature of places, and to vary the different forms of them; which occaſioned ſuch a confuſion, as made it difficult for the ſoldier to know exactly either his own quarters, or that of his corps. Polyb.

The form and distribution of the Roman camp admits of great difficulties, and has occasioned great disputes amongst the learned. I shall repeat in this place what Polybius has said upon this head, and shall endeavour to explain him in some places, and to supply what he has omitted in others.

Polyb. l. 6. p. 473, 477. He speaks of a consular army, which, in his time, consisted, in the first place, of two Roman legions, each containing four thousand two hundred foot, and three hundred horse; and, in the second, of the troops of the allies, a like number of infantry, and generally double the number of cavalry, which made, in all, Romans and allies, eighteen thousand six hundred men. For the better conceiving the disposition of this camp, we should remember what has been said above upon the different parts into which the Roman legion was divided.

SECT.

SECT. IV.

*Diſpoſition of the Roman * camp according to Polybius.*

AFTER the place for the camp is marked out, ſays Polybius, which is always choſen for its convenience in reſpect to water and forage, a part of it is allotted for the general's tent, which I ſhall otherwiſe call the prætorium, upon an higher ground than the reſt, from whence he may ſee with the greater eaſe all that paſſes, and diſpatch the neceſſary orders (1.). A flag was generally planted on the ground where this tent was to be pitched, round which a ſquare ſpace was marked out in ſuch a manner, that the four ſides were an hundred feet diſtant from the flag, and the ground occupied by the conſul about four acres. Near his tent were erected the altar, on which ſacrifices were offered, and the tribunal for diſpenſing juſtice.

The conſul commands two legions, of which each has ſix tribunes, which make twelve in all. Their tents are placed in a right line parallel to the front of the Prætorium, at the diſtance of fifty feet. In this ſpace of fifty feet are the horſes, beaſts of burden, and the whole equipage of the tribunes. Their tents are pitched in ſuch a manner, that they have the Prætorium in the rear, and in the front all the reſt of the camp. The tents of the tribunes, at equal diſtances from each other,

* *At the end of this ſection the reader will find a print of the Roman camp, with figures to which thoſe in the text refer.*

take

take up the whole breadth of the ground, upon which the legions are incamped (2.)

Between the tents of the legions and tribunes, a ſpace of an hundred feet in breadth parallel to thoſe of the tribunes is left, which forms a ſtreet, called *Principia*, equal in length to the breadth of the camp, which divides the whole camp into the upper and lower parts (3.)

Beyond this ſtreet were placed the tents of the legions. The ſpace which they occupy is divided in the midſt into two equal parts by a ſtreet of fifty feet broad, which extended the whole length of the camp. On each ſide on the ſame line were the quarters of the horſe, the Triarii, the Principes, and Haſtarii. Between the Triarii and the Principes, there is on both ſides a ſtreet of the ſame breadth with that in the middle, which, as well as the latter, runs the whole length of this ſpace. It is alſo cut by a croſs-ſtreet called the fifth, *Quintana*, becauſe it opened beyond the fifth maniple.

As each of the four bodies, I have juſt named, was divided into ten parts; the cavalry into ten companies, *Turmas*, each of thirty men; the three other bodies into ten maniples, of an hundred and twenty each, except thoſe of the Triarii, which conſiſted of only half that number; the quarters of the horſe, Triarii, Principes, and Haſtarii, were ſeverally divided, each into ten ſquares, along the ſpace aſſigned the legions as above deſcribed. Each of theſe ſquares was an hundred feet every way, except thoſe of the Triarii, which were only fifty feet ſquare, upon account of their ſmaller number, which we have already mentioned.

The tents, whether of the cavalry or infantry, are diſpoſed in the ſame manner, with their fronts towards the ſtreets.

The

The cavalry of the two legions are firſt quartered facing each other, and ſeparated by a ſpace of fifty feet, which is the breadth of the ſtreet in the middle. This cavalry making only ſix hundred men, each ſquare contained thirty horſe on each ſide (4), which are the tenth part of three hundred. On the ſide of the cavalry, the Triarii are quartered, a maniple behind a troop of horſe, both in the ſame form. They join as to the ground, but the Triarii turn their backs upon the horſe, and here each maniple is only half as broad as long, becauſe the Triarii are leſs in number than the other kind of troops (5.)

At fifty feet diſtance and fronting the Triarii, a ſpace which forms a ſtreet on each ſide in length, the Principes are placed along the ſide of the interval (6.)

Behind the Principes the Haſtarii were quartered, joining as to the ground, but fronting the different way (7.)

Thus far we have deſcribed the quarters of the two Roman legions, that formed the conſul's army, and conſiſted of eight thouſand four hundred foot, and ſix hundred horſe. It remains for us to diſpoſe of the allies. Their infantry were equal to that of the Romans, and their cavalry twice their number. In removing, for the extraordinaries or *Evocati*, the fifth part of the infantry; that is to ſay, ſixteen hundred foot, and a third of the cavalry, or four hundred men; there remained in the whole ſeven thouſand five hundred and twenty men, horſe and foot, to quarter.

At fifty feet diſtance, and facing the Roman Haſtarii, a ſpace which formed a new ſtreet on each ſide, the cavalry of the allies incamp (8), upon a breadth of an hundred and thirty-three feet, and ſomething more.

Behind

Behind that cavalry, and on the ſame line, incamp their infantry upon a breadth of two hundred feet (9).

At the head of every maniple, on each ſide, are the tents of the centurions. The ſame, no doubt, ſhould be ſaid of the tents of the captains of the horſe, though Polybius does not mention them. Part of the remaining ſpace behind the tents of the tribunes, and on the two ſides of the Prætorium or conſul's tent, was employed for a market (10), and the reſt for the quæſtor, the treaſury, and the ammunition (11).

Upon the right and left, on the ſides, and beyond the laſt tent of the tribunes, facing the Prætorium on a right line, were the quarters of the extraordinary * cavalry, *Evocatorum* (12——14); and of the other voluntier horſe, *Selectorum* (13——15). All this cavalry faced, on one ſide, towards the place of the quæſtor, and, on the other, towards the market. It did not only incamp near the conſul's perſon, but often attended him upon marches; in a word, it was generally at hand to execute the orders of the conſul and quæſtor.

The Roman infantry, extraordinary and voluntiers, are in the rear of the horſe laſt ſpoken of, and upon the ſame line (16), and do the ſame ſervice for the conſul and quæſtor.

Above this horſe and foot is a ſtreet an hundred feet broad, which runs the whole breadth of the camp.

On the other ſide of this ſpace are the quarters of the extraordinary foot of the allies facing the

* *Theſe two corps were horſe, either choſen by the conſuls themſelves, or ſuch as voluntarily attended them. This gave birth to the Prætorian cohorts, or bands under the emperors. The* Selecti *or* Allecti, *whether horſe or foot, were drawn out of the allies. The* Evocati *were voluntiers, old ſoldiers, either citizens or allies.*

market,

market, the Prætorium, and the treaſury, or place of the quæſtor (17).

The extraordinary foot of the allies were incamped behind their horſe, and faced the intrenchment and the extremity of the camp (18).

The void ſpaces that remained on both ſides were allotted to ſtrangers and allies, who came later than the reſt (19).

All things thus diſpoſed, we ſee the camp forms a ſquare, and that, as well by the diſtribution of the ſtreets, as the whole diſpoſition, it very much reſembles a city. And this was the ſoldiers idea of it, who conſidered the camp as their country, and the tents as their houſes.

Theſe tents were generally made of ſkins; from whence came the expreſſion, much uſed by authors, *ſub pellibus habitare*. The ſoldiers joined together in meſſes, which they called *Contubernia*. Theſe generally conſiſted of eight or ten men.

From the intrenchment to the tents is a ſpace of two hundred feet; and that interval is of very great uſe, either for the entrance or departure of the legions. For each body of troops advances into that ſpace by the ſtreet before him, ſo that the troops, not marching in the ſame way, were not in danger of crowding and breaking each other's ranks. Beſides which, the cattle, and whatever is taken from the enemy, is placed there, where a guard is kept during the night. Another conſiderable advantage of it is, that, in attacks by night, neither fire nor dart can be thrown to them; or, if that happens, it is very ſeldom, and can do no great execution, the ſoldiers being at ſo great a diſtance, and under the cover of their tents. If the camp of Syphax and Aſdrubal in Africa had been incloſed within

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ſo great a ſpace, Scipio had never been able to have burnt it in one night.

By the exact calculation of the camp, as Polybius deſcribes it, each front contained 2016 feet, which make 672 yards; ſo that the whole ſuperficies of the camp was 4,064,256 feet, or 225,792 ſquare yards.

When the number of troops was greater, the meaſure and extent of the camp was augmented, without changing its form. When the conſul Livius Salinator received his collegue Nero into his camp, the extent of the camp was not enlarged; the troops were only made to take up leſs ground, becauſe thoſe of Nero were not to ſtay long; which was what deceived Aſdrubal. *Caſtra nihil aucta errorem faciebant.*

Liv. l. 27. n. 46.

Polybius does not tell us, where the lieutenants, *Legati*, who held the firſt rank after the conſul, or the prætors and other officers, incamped. It is very likely, that they were not far from the conſul, with whom they had a continual intercourſe as well as the tribunes.

Nor is he more expreſs upon the gates of the camp, which were four according to Livy: *Ad quatuor portas exercitum inſtruxit, ut, ſigno dato, ex omnibus partibus eruptionem facerent.* He afterwards calls them *the Extraordinary*, *the Right principal*, *the Left principal*, and *the Quæſtorian.* They have alſo other names, about which it is not a little difficult to reconcile authors. It is believed that the *Extraordinary* gate was called ſo, becauſe near the place where the extraordinary troops incamped; and that it was the ſame as the Prætorian, which took its name from its nearneſs to the Prætorium. The gate oppoſite to this, at the other extremity of the camp, was called *porta Decumana*, becauſe near the ten maniples of each legion;

Liv. l. 40. c. 27.

gion; and very probably is the ſame with the *Quæſtorian*, mentioned by Livy, in the place above cited. I ſhall not expatiate any farther upon theſe gates, which would require long diſſertations.

But we cannot ſufficiently admire the order, diſpoſition, and ſymmetry of all the parts of the Roman camp, which reſembles rather a city than a camp: the tent of the general, placed on an eminence, in the midſt of the altars and ſtatues of the gods, which ſeemed to render the Divinity preſent amongſt them; and ſurrounded on all ſides with the principal officers, always ready to receive and execute his orders. Four great ſtreets, which lead to the four gates of the camp, with abundance of other ſtreets on each ſide of them, all parallel to each other. An infinity of tents, placed in a line at equal diſtances, and with perfect ſymmetry. And this camp ſo vaſt and extenſive, and ſo diverſified in its parts, which ſeemed to have coſt infinite time and pains, was often the work of an hour or two, as if it had roſe of itſelf out of the earth. All this, however, is nothing in compariſon with what, in a manner, conſtitutes the ſoul of the camp: I mean the wiſdom of command, the attention and vigilance of the general, the perfect ſubmiſſion of the ſubaltern officers, the entire obedience of the ſoldiers to the orders of their chiefs, and the military diſcipline, obſerved with unexampled ſtrictneſs and ſeverity: qualities which ranked the Roman people above all nations, and at length made them their maſters. The Roman manner of incamping muſt have been very excellent and perfect, as they obſerved it inviolably for ſo many ages, and with ſo great ſucceſs, and there is almoſt no example of their camp's being forced by their enemies.

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This cuſtom of fortifying camps regularly, which the Romans conſidered as one of the moſt eſſential parts of military knowledge and diſcipline, has been diſuſed by the moderns. The number of troops, of which armies are now compoſed, and that occupies a conſiderable extent of ground, ſeems to render this work impracticable, which would become infinite. The people of Aſia, whoſe armies were far more numerous than ours, never failed to incloſe their camp, at leaſt with very deep trenches, though they ſtaid only a day or a night; and often fortified it with good paliſadoes. Xenophon obſerves, that it was the great number of their troops itſelf, that rendered this practice eaſy.

Xenoph. in Cyrop. l. 2. p. 80.

It is agreed, that no people ever carried the knowledge and practice of the art of war to an higher degree of perfection than the Romans: but it muſt be confeſſed, that their principal excellency lay in the art of incamping, and in drawing up armies in battle array. And this is what Polybius admires moſt in it, who was a good judge of military affairs, and had been long a witneſs of the excellent diſcipline obſerved amongſt the Roman troops. When Philip, the father of Perſeus, and before him Pyrrhus, prejudiced by their eſteem for the Greeks, and full of contempt for all other nations, whom they treated as Barbarians, ſaw, for the firſt time, the diſtribution and order of the Roman camp, they cried out with ſurpriſe and admiration: *Sure that cannot be the diſpoſition of Barbarians!*

But what ought to ſurpriſe us moſt, and what it is even difficult to conceive, ſo remote are our manners from it, is this character of a people inured to the rudeſt toils, and invincible to the ſevereſt fatigues. We ſee here the effects of a good

good education, and wholſome habits contracted from the moſt early youth. Moſt of theſe ſoldiers, though Roman citizens, had eſtates, and cultivated their inheritances with their own hands. In times of peace they exerciſed themſelves in the moſt painful labours. Their hands, accuſtomed daily to wield the ſpade, turn up the land, and guide an heavy plow, only changed exerciſes, and even found reſt in thoſe impoſed upon them by the military diſcipline; as the Spartans are ſaid never to have been more at their eaſe than in the army and camp, ſo hard and auſtere was their manner of living at all other times.

Who could believe, that there was nothing, even to cleanlineſs, of which particular care was not taken in the Roman camp! As the great ſtreet, ſituated in the front of the Prætorium, was much frequented by the officers and ſoldiers, who paſſed through it to receive and carry orders, and upon their other occaſions, and thereby expoſed to much dirt; a number of ſoldiers were appointed to ſweep and clean it every day in winter, and to water it in ſummer to prevent the duſt.

SECT. V.

Employments and exercises of the Roman soldiers and officers in their camp.

THE camp being prepared in the manner we have described, the tribunes assemble to take the oath of all the men in the legions, as well free as slaves. All swear in their turn; and their oath consists in a promise not to steal any thing in the camp, and to bring whatever they should find in it to the tribunes.

The soldiers had before taken a like oath, at the time they were listed: I deferred repeating it till now, that, being joined with the other, its force might be the better conceived. By this first oath

Aul. Gell. l. 16. c. 4. "the soldier engages to steal nothing alone or in "concert with others, either in the army or with- "in ten thousand paces of it; and to carry to the "consul, or to restore to its lawful owner, what- "ever he may find exceeding the value of one "sestertius, that is to say, about five farthings, "excepting certain things mentioned in the oath." What is said here of ten thousand paces from the army does not mean, that the soldiers were allowed to steal beyond that distance: but whatever they found without those bounds they were not obliged to carry to the consul. Amongst things excepted, was the fruit of a tree, *pomum*.

Frontin. Stratag. l. 4. c. 3. Marcus Scaurus tells us, however, as a memorable example of the Roman abstinence, that, a fruit-tree happening to grow within the inclosure of the camp, when the army quitted it the next day, nobody had touched it. Scaurus commanded the army at that time.

This

This oath shews, how far the Romans carried their attention and exactness in preventing all rapine and violence in the army, because theft is not only prohibited the soldiery, upon pain of the most indispensable severities; but they are not even permitted to appropriate what they find on their way, and chance presents them. Hence the laws actually treat, as theft, the retaining any thing of another's after having found it, whether the owner were known or not: *Qui alienum jacens lucri faciendi causâ sustulit, furti obstringitur, sive scit cujus sit, sive nescit.* Sabin. ex lib. Jur. Civil. 2.

I have said, that theft was prohibited with inexorable severity. There is a very terrible example of this under the emperors. A soldier had stole a fowl from a peasant, and had eat it with nine other men in his mess. The emperor Pescennius Niger condemned them all to die, and only spared their lives at the earnest request of the whole army, obliging each of them to give the countryman ten fowls, and fixing a mark of public infamy upon them during the rest of the war. How many crimes is so wholsome a rigour capable of preventing! What a sight is a camp under such regulations! But what a vast difference is there between soldiers obedient to such a discipline in the midst of Paganism, and our marauders, who call themselves Christians, and fear neither God nor man! The inclosure of the camp was a good barrier against disorder and license; and we shall soon see, that, even upon marches, severity of discipline had no less effect than lines and intrenchments. Spartian. in Pescen.

A wonderful order was observed night and day throughout the whole camp, in respect to the watch-word, centinels, and guards; and it was in this its security and quiet consisted. To render the guard more regular and less fatiguing, the

night was divided into four parts or watches, and the day into four ſtations. Every one had his duty fixed, both in regard to time and place; and in the camp all things were regulated and diſpoſed, as in a well-ordered family.

I have already ſpoken elſewhere of the ſimplicity of the antients in regard to their proviſions and equipage. The ſecond Scipio Africanus would not ſuffer a ſoldier to have any more than a kettle, a ſpit, and a wooden bowl. * Epaminondas, the glorious Theban general, had only this furniture both for the field and city. The antient generals of Rome were not more magnificent. They did not know † what ſilver plate was in the army; and had only a bowl and a ſaltcellar of that metal for ſacrifices. The horſes glittered alſo with ſilver ornaments. The hours of dining and ſupping were made known by a certain ſignal. We have obſerved, that moſt of the Roman emperors eat in public, and often in the open air. It has been remarked, ‡ that Peſcennius made no uſe of coverings againſt the rain. The ‖ meals of theſe emperors, as well as of the antient generals, of whom Valerius Maximus ſpeaks, were ſuch as might be eaten in public without any reſerve! the meats of which they conſiſted had nothing

* Epaminondas, Dux Thebanorum tantæ abſtinentiæ fuit, ut in ſupellectili ejus, præter ahenum & veru unicum, nihil inveniretur. *Frontin. Strateg.* l. 4. c. 3.

† Præter equos viroſque & ſi quid argenti, quod plurimum in phaleris equorum, (nam ad veſcendum facto perexiguo, utique militantes, utebantur) omnis cetera præda diripienda militi data eſt *Liv.* l. 22. n. 52.

‡ Idem in omni expeditione, ante omnes militarem cibum ſumpſit nec ſibi unquam, vel contra imbres, quæſivit tecti ſuffragium. *Capitol.*

‖ Fuit illa ſimplicitas antiquorum in cibo capiendo, humaniratis ſimul & continentiæ certiſſima index. Nam maximis viris prandere & cœnare in propatulo, verecundiæ non erat. Nec ſanè ullas epulas habebant, quas oculis populi ſubjicere erubeſcerent. *Val. Max.* l. 2. c. 5.

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in them, that it was neceſſary to conceal from the eyes of the ſoldiers, who ſaw with joy and admiration, that their maſters were no better fed than themſelves.

What was moſt admirable, in the Roman diſcipline, was the continual exerciſe to which the troops were kept, either within or without the camp; ſo that they were never idle, and * had ſcarce any reſpite from duty. The new-raiſed ſoldiers performed their exerciſe regularly twice a day, and the old ones once. They were † formed to all the evolutions, and other parts of the art military. They were obliged to keep ‡ their arms always clean and bright. They were made to take haſty marches of a conſiderable length, laden with their arms, and ſeveral paliſadoes; and that often in ſteep and craggy countries. They were habituated always to keep their ranks, even in the midſt of diſorder and confuſion, and never to loſe ſight of their ſtandards. They were made to charge each other in mock battles, of which the officers, generals, and even the conſul himſelf were witneſſes, and in which they thought it for their glory to ſhare in perſon. When they had no enemy in the field, the troops were employed in conſiderable works, as well to keep them in exerciſe, as for the public utility. Such in particular are the highways, called for that rea-

* Opere faciendo milites ſe circumſpiciendi non habebant facultatem. *Hirt. in bell. Afric.*

† Ibi quia otioſa caſtra erant, crebro decurrere milites cogebat (Sempronius) ut tyrones aſſueſcerent ſigna ſequi, & in acie cognoſcere ordines ſuos. *Liv.* l. 23. n. 35.

Primo die legiones in armis quatuor millium ſpatio decurrerent. Secundo die arma curare & tergere ante tentoria juſſit (Scipio Africanus.) Tertio die ſudibus inter ſe in modum juſtæ pugnæ concurrerent, præpilatiſque miſſilibus jaculati ſunt. *Liv.* l. 26. n. 51.

‡ Acuere alii gladios; alii galeas buculaſque, ſcuta alii, loricaſque tergere. *Liv.* l. 44. n. 34.

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ſon *viæ militares*, which are the fruits of this wiſe and ſalutary cuſtom: *Stratum militari labore iter.* Quint. l. 2. c. 14.

We may judge whether, amidſt theſe exerciſes, which were almoſt continual, the troops could find time for thoſe unworthy diverſions, equally pernicious in the loſs of time and money. This itch, this phrenzy for gaming, which to the ſhame of our times has forced the intrenchments of the camp, and aboliſhed the laws of military diſcipline, had been regarded by the antients as the moſt ſiniſter of omens, and the moſt terrible of prodigies.

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